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ABSTRACT

The New Mexico School for the Deaf was awarded a five-year federal grant to implement and test a proposed bilingual/ESL model for students with deafness acquiring and learning two languages. The Star Schools project also was tasked with designing an effective system of staff development within residential schools for the deaf to guide teachers in the use of effective instruction to maximize students' affective, cognitive, social, American Sign Language (ASL) proficiency, English literacy acquisition, and academic achievement through the use of two languages: ASL and English. This report summarizes the first year's research on the implementation of staff development for teachers of children with deafness. Fifteen elementary school teachers from two residential schools for the deaf participated in a year-long staff development program. This program included 36 hours of seminars in bilingual/ESL theories. Analysis of reflective logs indicate that the seminars prodded teachers to reexamine their beliefs about how students with deafness acquire language and literacy. Appendices include course syllabi and answers to questions regarding bilingualism, first and second language acquisition, and teaching techniques that emerged from discussions with teachers and other professionals concerned with implementing bilingual education for students with deafness. (Contains more than 200 references.) (CR)

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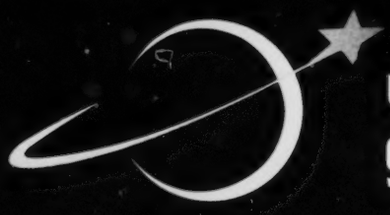

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Critical Pedagogy in Deaf Education:

Bilingual Methodology and Staff Development

Stephen M. Nover, Project Director

USDLC Star Schools Project Report No. 1

CRITICAL PEDAGOGY IN DEAF EDUCATION: BILINGUAL METHODOLOGY AND STAFF DEVELOPMENT

Stephen M. Nover, M.A.
New Mexico School for the Deaf

and

Jean F. Andrews, Ph.D.
Lamar University

September 30, 1998

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To receive additional copies of this report, or for more information,

please send correspondence to:

Stephen M. Nover, Language Planner and Star Schools Project Director
New Mexico School for the Deaf
1060 Cerrillos Road
Santa Fe, New Mexico 87503
V/TDD: (505) 827-6739
FAX: (505) 827-6684
E-Mail: snover@nmsd.k12.nm.us

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PREFACE

The New Mexico School for the Deaf (NMSD), Santa Fe was awarded a five-year grant of $ 1.3 million through the Office of Educational Research and Improvement, U.S. Department of Education, Grant #R203A70030-97. The purpose of the Star Schools project is to implement and test a proposed bilingual/ESL model for deaf students acquiring and learning two languages, American Sign Language (ASL) and English. In addition, the project will design an effective system of staff development within deaf residential schools to guide teachers in the use of effective instruction to maximize deaf students' affective, cognitive, social, ASL proficiency, English literacy acquisition and academic achievement through the use of two languages: ASL and English. This report summarizes research on the implementation of staff development for teachers of deaf children.

Today, schools for deaf children and youth in the nation are in the process of change. Many, dissatisfied with traditional ways of teaching, have sought opportunities to re-examine current pedagogical practices. One change has been the adoption of ASL-English bilingual programs in deaf residential schools across the country. As yet, however, published standards, curriculum guidelines, and effective strategies available for teachers to use this approach are very limited. Further, many teachers for the deaf receive little or no training in the process of teaching deaf children bilingually (Strong, 1995).

The challenge for the deaf education field is to implement and test a proposed bilingual/ESL model by focusing on how bilingual education can be effective for deaf students. We have chosen the title Critical Pedagogy in Deaf Education: Bilingual Methodology and Staff Development because our aim is to promote an approach to teaching and learning in which teachers and students reflect critically on classroom practice with the objective of improving student learning. Using this approach, the Star Schools project teachers "name" or recognize their beliefs about language learning and teaching, "reflect" critically on them, and then "act" on these beliefs in the classroom. In the same way, students are encouraged to practice and test the validity of the knowledge they acquire in the classroom using their own contexts and experiences and thereby empowering themselves by taking ownership of their education.

The theoretical background for the project model is based on bilingual and English as a Second Language (ESL) principles, theories of first (L1) and second (L2) language acquisition, Whole Language practices, ASL signacy development, and English literacy development for deaf students. This model supports classroom instruction that incorporates ASL, English, and Deaf culture. In this report, we describe and discuss the findings of the first year of our five-year longitudinal project using this model.

The Star Schools project model will ostensibly change, deepen, expand and be refined as data are collected and analyzed over the five-year grant period. Currently, it represents a starting point to investigate a question that has perplexed teachers for years: How can teachers utilize ASL academically while, at the same time, enhancing English literacy?

During Year One, 15 elementary school teachers from two residential schools for the deaf in the Southwest (New Mexico School for the Deaf and Texas School for the Deaf [TSD]) participated in a year-long staff development program. This program included 36 hours of seminars in bilingual/ESL theories. Specifically, it included theoretical background and, where possible, applied research findings related to the new language teaching practices being fostered. The teachers reflected on why an instructional change is being sought and what research evidence supports that change. For example, teachers read selected articles and books, responded to these readings in group seminars with other teachers, wrote learning logs, and applied concepts gleaned from these experiences in their classrooms.

Using action research and descriptive observation methods, we described the bilingual/ESL model, the staff development training sessions, and the teachers' responses to the first year of training. We used teacher rating scales and case studies (or teacher stories) of how they applied these bilingual/ESL theories in the classroom to bring personal and professional insights to the learning process. We have shared and discussed teachers' responses using an approach that encourages them to analyze how their experiences in staff development can improve their practice, thereby improving student learning.

This report concludes with a description of our staff development plans for Year Two through Year Five. The appendices provide readers and practitioners with detailed course syllabi of the seminars for Year One and Year Two with data on teachers' distribution of the two languages in the classroom. Finally, we address 10 provocative questions regarding bilingualism, first and second language acquisition, and teaching that have emerged from our year-long discussions with teachers and other professionals concerned with implementing bilingual education for deaf students.

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School Adminstrators

New Mexico Schools for the Deaf
Madan Vasishta, Superintendent
Lynann Barbero, Director of Instruction

Texas School for the Deaf
Claire Bugen, Superintendent
Betty Bounds, Interim Assistant Superintendent

New Mexico School for the Deaf: Star Schools Project Staff

Stephen M. Nover
Carla Fenner
Tommie Brasel
Mindy Bradford

Participating Teachers

New Mexico School for the Deaf
Tommie Brasel, Mentor
Kellie Barnes
Sally Bunce
Todd Czubek
Robin Geesey
Kathy Glyer
Laurel Maradik
Margie Propp
Susan Revels
Rosemary Romero
Cathleen Shaver

Texas School for the Deaf
Betty Bounds, Mentor
Johnett Scogin, Mentor
Cynthia Cunningham-Piper
Sharee Darce
Vicki Everhart
Carilynne Gay
Kim-Jennifer Hamilton
Avonne Brooker-Rutowski
Christina Sicoli

Educational Research Team

Jean F. Andrews, Lamar University
Betty Bounds, Texas School/Deaf
Tommie Brasel, New Mexico School/Deaf
Susan Dickinson, Douglas County, CO
Carla Fenner, New Mexico School/Deaf
Nancy Eades, Kansas School/Deaf (KSD)
Laurene Gallimore, W. Oregon University
Stephen Nover, New Mexico School/Deaf
Johnette Scogin, Texas School/Deaf
Dr. Pam Shaw, Kansas School/Deaf

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Stanford Unversity

Eddy Laird,
Lamar University

David Martin,
Gallaudet University

Mary Martone,
New Mexico School for the Deaf

Susan Mather,
Gallaudet Univeristy

Bill McCrone,
Gallaudet University

Donald Moores,
Gallaudet University

Judith Mounty,
Gallaudet University

Peter V. Paul,
The Ohio State University

Roslyn Rosen,
Gallaudet University

Nadeen T. Ruiz,
California State University, Sacramento, CA

David Stewart,
Michigan State University

Michael Strong,
Univeristy of California, San Francisco

Steve Witchey,
Eastern North Carolina School for the Deaf

Abstract

This is the first year of a five-year longitudinal study designed to implement and test a proposed bilingual/English-as-a-second language (ESL) model for deaf children that addresses affective, cognitive, social, ASL proficiency, English literacy and academic issues through the use of two languages: American Sign Language (ASL) and English. During Year One (1997-1998), 15 teachers from two residential schools for the deaf who worked with 90 deaf children at the elementary grade levels (Kindergarten through 5th grade) participated in year-long staff development training. Training included 36 hours of seminars in bilingual/ESL theories, theories of first- and second- language acquisition, Whole Language, and theories of language and literacy development. Teachers read selected articles, responded to these readings in group seminars with other teachers, wrote learning logs, and then applied these concepts in the classroom. Using action research techniques, we describe the bilingual/ESL model, the staff development training, and the teachers' responses in Year One. We use teacher rating scales and case studies (or teacher stories) to show how teachers grew in their understanding of second-language-acquisition theories and how they applied those theories in the classroom. We conclude with a description of our plan for Years Two through Five. Appendices contain data related to our teachers' responses to the training.

Introduction

> In my preparation as a teacher, no one ever told me about contradictions in education. No one ever told me about change in education. However, I am learning that contradictions and change are fundamental for critically teaching and learning in the 21st century (Wink, 1997).

Critical pedagogy is an approach to education that emphasizes the importance of an interactive learning environment in which learners are encouraged to acquire knowledge and confirm its validity in the context of their experience. While this is a general approach to education, it is especially valuable for students whose backgrounds, histories, and cultures tend to conflict with those of the larger society; in this circumstance, the results are often domination, paternalization, and oppression of the poorer, marginalized, and less-powerful groups. Critical pedagogy requires that the starting point for the education of children be their own authentic experiences in the context of their culture. The expectation is that these students will develop critical thinking skills about their schools, their culture, and their learning. Teachers, along with students, explore their environment through dialog, reflective thinking, and action.

Joan Wink (1997), in her book, Critical Pedagogy: Notes from the Real World, applied this notion of critical pedagogy to teaching in her classroom. She recognized that change is fundamental to this philosophy. According to Wink, not every child fits every learning theory. Teachers must continually question previous beliefs and assumptions and respond to the real child in the classroom. Critical pedagogy, she said, is a process where teachers name their beliefs, reflect critically on them, and then act on them. This involves problem posing, reflective thinking, knowledge gathering, and collaborative decision-making where teachers, with their students, learn new information and explore ways of using this knowledge (e.g., Carter, 1993; Coye, Humphries, & Martin, 1978; Joyce & Showers, 1995; Kutner, 1992; Murry, 1996; Ovando & Collier, 1998).

The orientation of this study is critical; it assumes that deaf students have a distinct culture (Deaf Culture) with identifiable values and traditions and a language (ASL) with a long history of development (e.g., Andersson, 1994; Barnum, 1984; Bienvenu, 1992; Lucas, 1996; Padden & Humphries, 1988; Kannapell, 1974, 1978; Padden & Ramsey, 1993; Parasnis, 1996; Stokoe, 1980; Wilcox, 1989). These students are part of a cultural minority group that has been marginalized in U.S. society and schools; their language, ASL, has been almost completely excluded from the education of deaf students (Christensen, 1993; Kannapell, 1974, 1978, 1993; Ruiz, 1993/1994; Woodward, 1978, 1982). In this context, how does one make education meaningful to deaf students in a way

that allows them to question critically rather than accept passively values that interfere with the development of their full potential? Further, how can we facilitate teachers questioning of traditional beliefs about how languages are acquired and how language is taught? Educational traditionalists have essentially ignored these questions by focusing primarily on the language and culture of the Hearing world while avoiding the issues raised by the inclusion of American Sign Language and Deaf culture in instructional settings (e.g., the inclusion movement; Boese, 1975; Branson & Miller, 1995; Evans, 1998; Ewoldt, 1993-94; Lane, 1992; Lane, Hoffmeister, and Bahan, 1996; Nover, 1995; Reagan, 1994; Rinnie, 1995; Woodward, 1978, 1982).

Historical Evolution of Deaf Education

Historically, teachers' beliefs and assumptions about language development and deaf children have profoundly influenced how they taught. For example, from 1900 to 1950, many believed that with repetitious training, deaf children would develop English through speech training. From the 1950s to the 1970s, behaviorist theories dominated. These theories were based on the belief that if children were exposed to both speech and signing, they would develop English skills from imitating teachers and parents. In the late 1960s, sign language was recognized by linguists as a natural language (Stokoe, 1960). Educators began using signs in the classroom with the philosophy of total communication. The term total communication (TC) was first coined by a deaf man, Roy K. Holcomb, in 1967 (Evans, 1982; Garretson, 1976). Holcomb proposed that TC consists of auditory training, speech, speech reading, finger-spelling, and the language of signs (ASL); he emphasized the importance of using all means of communication with deaf children at the earliest possible age. While TC did break oralism's strong grip on schools and led to the re-introduction of ASL in classroom and homes, TC did not lead to expected gains in academic achievement for deaf students (Barnum, 1984; Charrow, 1975; Johnson, Liddel & Erting, 1989; Stewart, 1992; Woodward, 1978, 1982). For many, total communication evolved into artificially constructed manual systems which dominated most classrooms (Hoffmeister, 1990; Evans, 1982; Moores, 1996; Nover, 1995b; Reagan, 1995; Stewart, 1992; Woodward, 1978, 1982). From the 1970s to 1980s, Chomsky's (1965, 1967, 1968) theories of transformational grammar filtered into the field, and teachers began to see language as having a different levels of structure and meaning. Also during this time, artificially constructed manual systems of English became popular. Schools throughout the country mandated the use of these systems in the belief that if deaf children were exposed to them, they would develop reading and writing skills (Reagan, 1995; Ramsey, 1989;

Stewart, 1992). Now, in the 1990s, the bilingual-bicultural, Whole Language,[1] and emergent literacy approaches of teaching deaf children language and literacy have gained recognition in schools (e.g., Ewoldt, 1993-94; Fernandes, 1997; LaSasso & Metzger, 1998; Liddell & Johnson, 1992; Livingston, 1997; Paul, 1998; Prinz & Strong, 1998; Strong, 1988b, 1995; Walworth, Moores & O'Rourke, 1992).

For many teachers, the bilingual-bicultural approach has meant the use of ASL as the language of instruction, teaching English as a second language, and offering speech instruction as an elective. Also included in this approach is an emphasis on providing students with knowledge about Deaf culture. Schools for deaf children such as those in Indiana, California, Massachusetts, Texas, New Mexico, and Maryland have endorsed this approach in the U.S. (Ewoldt, 1993-94; Livingston, 1997; Nover, 1995b; Prinz & Strong, 1998; Strong, 1988b, 1995). Schools in France (Bouvet, 1990), Denmark, and Sweden (Mahshie, 1995) are also using a bilingual approach. Despite acceptance of the bilingual approach, there are no standards, and limited publications of curricula or guidelines are available for using it (Cokely, 1978; Stewart, 1992; Strong, 1995). Therefore, a stronger research base is needed. As far as we know, many teachers receive little or no training in bilingual/ESL approaches (Cokely, 1978; Gallimore, 1993; Woodward, 1978).

In our view, bilingual education involves more than using ASL to teach English. It is not enough to present academic concepts in ASL and expect deaf students to use these concepts to build English skills. Students need explicit instruction about how ASL structures work as well as how English grammar works via reading and writing lessons (Hoffmeister, in press; Padden, in press; Padden & Ramsey, 1996, 1998; Stewart, 1992). Initially, it may take two languages (both ASL and English) for deaf students to build English skills. Teachers, therefore, need to possess a knowledge of and fluency in both ASL and English as well as an adequate understanding of principles of second-language acquisition, bilingual methodologies and language acquisition, and learning strategies uniquely tailored to deaf students (Prinz & Strong, 1998; Strong, 1988b).

The bilingual approach also involves notions of cultural congruence. This means teachers can develop approaches to teaching and can organize their classrooms in ways that are compatible with the students' background and language (e.g., Lee & Fradd, 1998; Philips, 1983; Tharp, 1994). Like the students who do not have an English language

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[1] The "whole language" approach emphasizes the whole connected text with alphabetic and word learning assumed to occur implicitly. In contrast, the phonics approach emphasizes sound-spelling patterns like the "direct code" approach which focuses on letter-sound correspondences. Practitioners vary on how they implement these approaches, some to a greater (or lesser) degree than others. Today, teachers use a combination of "top-down" and "bottom-up" approaches, depending on the specific reading skills to be taught (see: Altwerger & Flores, 1996; Draper & Smith, 1996; Harman, 1996).

background and, consequently, need teachers who are sensitive to their culture and background, deaf children will benefit from instruction that is sensitive to their visual ways of learning as well as Deaf culture (Christensen, 1993; Humphries, 1993; Lucas, 1996, 1998; Mather, 1989).

Further, the bilingual approach involves the understanding and awareness of Deaf cultural issues such as oppression, audism, and hearization. Lane (1992) provided an in-depth analysis of oppression, which is implicitly present in deaf education. For example, he described how the underlying mechanism of traditional educators and professionals promotes, reproduces, and maintains dominant-subordinate relationships within the framework of deaf education. In other words, these mechanisms legitimize, disseminate, promote, reproduce, and maintain auditory-based doctrines through the established political and educational practices in deaf education. Similarly, another form of oppression is "audism," which was first coined by Tom Humphries who described the devaluation of the views and experiences of deaf people by hearing professionals (Lane, 1992; Nover, 1993, 1995b). Further, it is defined as any attitude, belief, behavior, or institutional arrangement that tends to favor the hearing majority group over the Deaf minority group, the Deaf community (e.g., Lane, 1992; Nover, 1993, 1995; Nover & Ruiz, 1994; Vernon & Makowsky, 1969; Vernon, 1990; Vernon & Andrews, 1990; Woodward, 1978, 1982). In addition to these forms of oppression, hearization was coined by Nover (1995b) who defined it as a process whereby deaf children are forced to imitate and then are directed to repeat the unnatural language behaviors, preferences, expectations, values, perspectives, ethos, and characteristics of an auditory-based culture through spoken or an artificial manual code of English. This process thus severely constrains[2] deaf children's acquisition of a natural language, ASL, and prevents them from fully understanding their own Deaf culture. Another form of oppression is the authoritarian personality, which is often overlooked in school discussions (Vernon & Makowsky, 1969; Vernon, 1990). Vernon described as authoritanian those personality traits that sought to dominate, control, or paternalize deaf persons. Such individuals have high levels of repressed anger and hostility which they direct at deaf persons, minorities, or other persons who they consider different.

These negative attitudes toward the deaf can affect deaf children's self-concepts. Several studies citing the effects of negative attitudes have been conducted by Keefe (1982), Rinnie (1995), and Wrigley (1992). Keefe investigated the hidden curriculum of preschool programs for the deaf in Massachusetts. One significant finding revealed that the hidden curriculum does have significant negative effects on the self-image and development

[2] Critical period will have been long passed when deaf children are exposed to ASL.

of deaf children. Rinnie described the attitudes of hearing professionals and educators and stated that ASL was prized by deaf people and less respected by many hearing people in deaf education. Wrigley provided an in-depth analysis of how the pathological views of hearing people shaped the politics of Deaf identity. He reported that they repeatedly devalued the visual modality of ASL used by deaf people.

Currently, many hearing professionals working with deaf students continue to hold these negative attitudes (e.g., Bellugi, 1975; Glickman, 1993; Hoffmeister, 1996; Kannapell, 1978; Sussman, 1975; Woodward, 1978, 1982). Using the notion of "critical pedagogy" within a bilingual approach, these issues need to be confronted to allow teachers to examine traditional ways of teaching deaf children related to language learning (ASL and English) and to explore strategies that result in a more effective approach (e.g., Coye, Humphries, & Martin, 1978).

Toward an Enhanced Model

The purpose of this study is to examine the implementation of a more effective model for deaf education using a bilingual/ESL approach. Teachers in our study examined current theories in bilingual/ESL approaches, first- and second-language acquisition, Whole Language, and English literacy development and their application to language learning and language teaching of deaf children. We then asked teachers to rate these theories and create language teaching strategies for use with deaf students in their classrooms.[3] Through these efforts, we are seeking to develop a theoretical framework for enhancing the instructional model.

Theoretical Framework: Bilingual/ESL Model

One potential source for a language learning and teaching framework for deaf education derives from the developing bilingual and second-language acquisition research literature (e.g., Arias & Casanova, 1993; August & Hakuta, 1997; Baker, 1996; Lyon, 1996; Strong, 1988b). In fact, educators such as Mahshie (1995), Paul (1998), and Strong (1988b) in deaf education have often quoted Stephen Krashen (1987, 1988, 1995, 1996), Jim Cummins (1984, 1989, 1995) and Kenji Hakuta (1986, 1990)--well-known bilingual and second-language theorists. There are also detailed descriptions of teachers using these and other bilingual/ESL theorists' work with deaf children in France, Sweden, and Denmark. For example, Danielle Bouvet (1990), a French speech-pathologist, worked

[3] We make a distinction between language teaching strategies and language learning strategies. Language teaching strategies are the techniques that teachers use to teach language. Language learning strategies are the ways that students themselves learn language (i.e., using memory, metacognitive strategies, etc.) (see Brown, 1994; Christie, Enz, & Vukelich, 1997).

with teachers of deaf children in France, to establish a bilingual-bicultural kindergarten and first grade. She revealed that teachers used these concepts to teach deaf children by using French Sign Language to read and write French. Using teacher and parent interviews in Denmark and Sweden, Mahshie (1995) reflected on teachers' use of bilingual concepts to teach deaf children Swedish or Danish using their respective countrys' indigenous sign language.

Currently, the Council on Education of the Deaf (CED) is the national professional organization, which provides program evaluation and teacher professional certification. Their standards include teacher-preparation competencies, educational foundations, deaf learner characteristics, assessment and evaluation, instructional content and practice, planning the educational environment, managing student behaviors, communication partnerships, and professional and ethical practices (Council on Education of the Deaf, 1990). Recently, the CED committee adopted the concept of bilingual education as one track that the teacher-preparation programs may follow. The details and particulars of setting up such a bilingual track with subsequent evaluation criteria is currently in progress so professionals in deaf education can expect to see this innovation further developed soon (Nover, 1995b; Nover, Christensen & Cheng, 1998) .

One developmental model that may be useful in deaf education is Lyon's (1996) Developmental Threshold Model. This model explains the normal development of bilingual hearing children (see Figure 1). Relating Lyon's model to deaf students, in the earliest part of bilingual development (Early Language), the child first acquires language in the form of signs and phases in one or two languages. When the child crosses the next threshold (Potential Bilingualism), the child uses simple sentences in ASL (L1) plus words in the second (English) language (L2). In the third threshold (Developing Bilingualism), the child uses appropriate levels in ASL plus simple sentences in the L2 (English). Finally, in the fourth threshold (Proficient Bilingualism), the child attains age-appropriate levels in both languages, ASL and English. Such a model, modified from Lyon's work provides a measure of how the bilingual deaf child is progressing in both languages--ASL and English.

Justification for a Theoretical Model

Because of deaf students' diverse language backgrounds and histories, some researchers have argued that the field does not need a model for deaf education but simply a more complete description of individual deaf children's communication repertories and sense-making efforts (Boese, 1975; Maxwell & Doyle, 1996). It is our position that deaf education would benefit from both a model to guide language instruction as well as detailed

descriptions of deaf children's language acquisition, learning (ASL and English) and English literacy development.

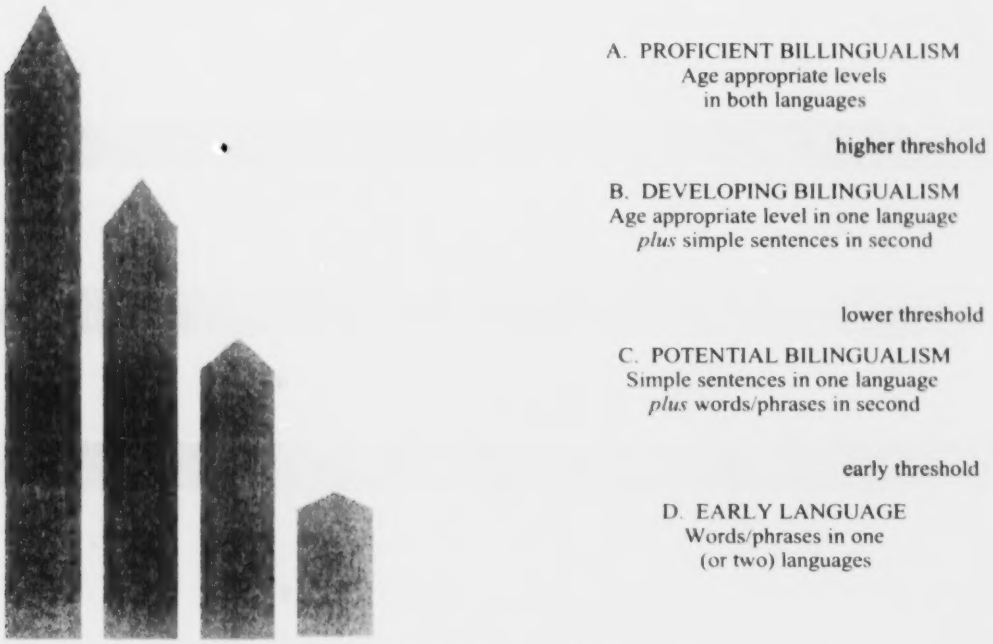

Figure 1 Developmental Threshold Model: Level of Bilingualism Attained
Source: Reprinted with permission from Lyon (1996).

Selecting a theoretical model has many benefits. First, a model allows researchers to synthesize current research and refocus it on the needs of deaf students (e.g., Boese, 1975; Erting, 1981; Hoffmeister, 1990; Kannapell, 1974, 1978; Evans, 1998; Prinz, 1998; Strong, 1988). A comprehensive model also enables researchers to draw upon previous literature for both the design and interpretation of research. With a comprehensive model, researchers can compare and contrast similar studies that test the effectiveness of bilingual programs (DeFelix, 1990). By proposing such a model, we can re-frame the question of whether bilingual education is effective for deaf students to how bilingual education is effective for deaf students. By enabling teachers to analyze the latter question critically in real classrooms with their deaf students, we can move the discussion out of the "armchair theorist's lounge" to the real world of practical applications.

Our bilingual/ESL model will ostensibly be changed and refined as data are collected and analyzed. It will represent a starting point to investigate the question that has perplexed us for years--how to improve the language and academic achievement of deaf students.

A Proposed Bilingual/ESL Model for Deaf Students

This proposed bilingual/ESL model was derived from the Project Director's graduate course work in deaf education and language, reading, and culture, including the study of theories of bilingualism, sociolinguistics, and language planning. The model was further influenced by his educational experiences as a deaf person (see a case history of a deaf person learning languages in Nover & Moll, 1997). For the most part, decisions on language teaching methods for deaf children have been heavily based on pathological and medical views of professionals rather than on appreciating and using the unique experiences of deaf learners, deaf teachers and staff who have gone through the educational system (e.g., Hoffmeister, 1996; Woodward, 1982). This project emphasizes the importance of incorporating deaf signing adults' cultural view of the educational system and hopes to contribute to the research base by developing case studies of how deaf students learn and use two languages.

The model hypothesizes two approaches to develop competency in ASL and English. The two approaches are (a) a bilingual approach with ASL dominance and (b) an ESL approach with English only. See Table 1 for the two approaches with subsequent skills.

Table 1: Language Use and Teaching Model for Deaf Students

Bilingual approach (ASL dominance and codeswitching)	**English as a second language (ESL) approach (English only and no codeswitching**
ASL signacy[4] abilities	English literacy/oracy abilities
Watching and attending	Finger-reading
Signing	Finger-spelling
English literacy[5]/oracy[6] abilities	Reading (English text)
Finger-reading	Writing (English text)
Finger-spelling	Typing (English text)
Reading (English text)	Lip-reading (where appropriate)
Writing (English text)	Speaking (where appropriate)
Typing (English text)	Listening (where appropriate)
Lip-reading (where appropriate)[7]	
Speaking (where appropriate)	
Listening (where appropriate)	

[4] "Signacy" is defined as the ability to control the visual signing medium of linguistic transmission in the form of signing and watching/attending skills (Nover, Christensen & Cheng, 1998).

[5] Literacy refers to skills of reading and writing (Baker, 1996; Bench, 1992; Crystal, 1987, 1992; Richards, Platt, & Platt, 1992)

[6] Oracy is ability in speech fluency and listening comprehension (Baker, 1996; Bench, 1992; Crystal, 1987, 1992; Richards et al., 1992)

[7] Lip-reading, speaking, and listening skills. Some deaf students have the aptitude and residual hearing to benefit from lip-reading, speech, and listening instruction. A bilingual/ESL approach can provide these skills where appropriate.

Before describing our study results and investigating this model, a discussion of key concepts is provided.

Definition of Key Concepts

Bilingual Approach

The bilingual approach involves the dominant use of ASL for academic and English language instruction. Students and teachers use ASL for social communication and classroom instruction. Students also benefit from interactions with their peers using ASL. We illustrate the bilingual approach in the following vignette.

In her fourth grade class, Ms. Jones uses ASL to discuss The Lion, the Witch and the Wardrobe, a classic children's novel by C. S. Lewis (1978). She signs the first chapter in ASL and engages the students in a discussion of the story, all conducted in ASL and English through finger-spelling and finger-reading. The children then read the printed text in English. Next, Ms. Jones puts up an overhead of paragraphs of the chapter in English, so the class can go through sentence-by-sentence translating[8] of the English print into ASL together. In a follow-up directed reading lesson, she teaches specific vocabulary and English grammar structures by writing key words and sentences from the book on the blackboard to discuss. As she moves from ASL to printed English, she engages the children in more discussion. She finger-spells new vocabulary in English, writes them on the blackboard, and then explains the definitions using ASL. By codeswitching[9] from ASL to English, the children delve deeper and deeper into the meaning of the story. Other follow-up English literacy activities include the children writing summaries of the chapter and typing them on a computer. Students may bring home the written summaries and memorize new vocabulary by using finger-spelling. In Mrs. Jones' class, students are given clear representations of two languages--ASL and English--through a variety of whole-to-part language activities. The languages are not mixed in Mrs. Jones' class as in

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[8] Providing a translation from one language to another is considered to be a bilingual teaching strategy (Campbell, 1998; Dufour, 1997; Ovando & Collier, 1998).

[9] Codeswitching is a sophisticated, rule-governed communicative device used by skilled bilinguals to achieve a variety of communicative goals, such as switching languages, conveying emphasis, role playing, or establishing cultural identity (Beardsmore, 1986; Crystal, 1992; Jacobson, 1990, 1995; McLaughlin, 1995; Milroy & Muysken, 1995). Deaf persons use ASL in conversations but will codeswitch to English for reading and writing. Additionally, the use of finger-spelling (handshapes corresponding to the 26 letters of the alphabet) are also used to spell out words (Meadow, 1972). Finger-spelling is frequently used in the Deaf community to spell out English words (e.g., proper nouns as in the names of persons, places, things, and technical terms). In a bilingual teaching environment, teachers and students move back and forth or codeswitch from English texts to ASL. Finger-spelling is commonly used both in the ASL context and in the English print context (to spell out words the child is reading or writing). See Appendix A, Language Learning and Language Teaching Issues, for a discussion of ASL-English translation strategy)

the case of artificially constructed manual systems that combine sign with speech, but separate models of ASL and English are both presented.

In sum, the bilingual approach uses ASL to teach academic subjects as well as English as a second language. This approach is recommended for all grade levels of deaf students. The bilingual approach focuses on the visual and cognitive strengths of deaf learners as opposed to existing language deficiency models that focus on deaf learners' weaknesses related to audition (Grushkin, 1998; Kuntze, 1998). In contrast to the auditory system, which does not always facilitate the natural language processing of deaf learners, the bilingual approach uses modalities accessible to deaf students to provide them with meaningful instruction.

ESL Approach

After deaf students feel confident using both languages (ASL and English) through the bilingual approach presented above, they are ready for classroom activities that use more English as a second language (ESL) approaches. This approach provides a system of instruction that enables students who are not proficient in English to acquire academic proficiency in spoken and written English. ESL is an essential component of all bilingual education programs in the U.S. for students who are learning English as a new language (Freeman & Freeman, 1998; Ovando & Collier, 1998). When applied to deaf students, the ESL approach could be set up in a classroom where students engage in activities using English without codeswitching in ASL. Such ESL activities could include at least eight language skills: finger-spelling, finger-reading, reading texts, writing text, typing, lip-reading, speaking and listening, when appropriate (see Table 1). It is important to note that the ESL approach does not use any of the artificially constructed manual systems of English communication.

A cautionary note of explanation is needed. The ESL approach is ideal for deaf students who already have a developing language foundation.[10] The ESL approach is not appropriate for deaf students with an undeveloped language base who are still in the early acquisition stages. For example, deaf immigrant students who have recently arrived in the United States may not benefit from an ESL approach. They will, however, benefit from the bilingual approach, emphasizing the acquisition of ASL.

The aim of the ESL approach is to reinforce, strengthen, and use English exclusively. Let's go back to Mrs. Jones' class. Her six deaf students sit in a class, and their personal computers are linked together in a network. During History class, they are

[10] Developing language foundation: Some teachers erroneously label deaf students' early language foundation as weak, when in fact a better explanation would be their second (and often first) language foundation is still in the developmental stages.

reading and writing reports about the American Revolution, using a CD-ROM and the Internet. Mrs. Jones is engaging one student in a discussion about Benedict Arnold. The student is confused over the term traitor, which he stumbled upon in a passage on the CD-ROM encyclopedia. He types to his teacher, "What does 'traitor' mean?" She types back, "A traitor is a person who wants to overthrow his country, such as a spy like Arnold who gave away American secrets to the British." Thus, this teacher engages her student in a discussion about the meaning of traitor using only English. The deaf student, then, is using English to learn more about history as well as using English in a real communicative context.

Because ASL is not used in an ESL approach, the teacher must be watchful of the students' frustration level. Traditionally, many deaf students dislike English classes because they are engaged in irrelevant language drills that decontextualize English. In addition, deaf students have had inadequate opportunities to express opinions, feelings, and ideas about history in English. The ESL approach, if properly implemented, may result in more positive attitudes about English by deaf students. Through research and field testing, this project intends to identify ways in which the ESL approach may result in more positive attitudes about English by deaf students.

An alternative to the bilingual and ESL approaches as outlined might be a bilingual approach with English as the first language and ASL as the second language (ASLSL). Some deaf learners who are fluent in English are just beginning to acquire ASL. We need to work with these learners too. Teachers can determine bilingual proficiency by gauging how much the students are progressing in both ASL and English development so they can plan language instructional activities effectively. Measures of these abilities can be developed to address specific language situations. We strongly recommend that deaf students acquire, learn, and use both ASL and English; thus, ample opportunities can be provided to develop their multiple language abilities. As ASL and English are used more effectively in classrooms, it is anticipated that students will develop positive attitudes, experiences, and competencies in both languages.

With the bilingual/ESL model for deaf children still in a developmental stage, we have not yet tested it with real teachers and students. Our five-year "Star Schools Project," however, currently is testing this model. The project will use collaborative action research techniques, gathering and analyzing data by means of teacher interviews and observations of classroom language learning.

Research Questions

This one-year study is part of the larger five-year longitudinal study involving two residential schools for deaf children in Texas and New Mexico. The larger study will test a bilingual/ESL model of language instruction for deaf children by collecting data on teachers and students. Products of this larger study include: (1) standards, curricula, and training videotapes for schools and universities to train teachers in bilingual/ESL methodologies and (2) standards, curricula, and training for schools to raise the literacy levels of young deaf students.

This first-year study of the five years adds to the research base by introducing bilingual/ESL theories, including a Whole Language philosophy, first- and second-language acquisition, and learning and literacy development methods to teachers. Teachers reflect critically on these principles and determine how to apply them in the classroom with their deaf students over one full school year.

Central Research Questions

During our first year, we began with teachers' observations as they documented how they recognized, critically reflected upon, and acted on the bilingual and ESL concepts and principles presented to them in the staff development seminars. The research questions follow.

1. How did teachers rate bilingual/ESL readings over a full school year?
2. What bilingual/ESL readings did the teachers rate as the most relevant for teaching deaf students?
3. What background variables of the teachers affected these judgments?
4. How did teachers change in their beliefs about language acquisition and language learning over a full year?

Data Collection and Analysis

Methods

During our first year of study, college researchers and teachers worked collaboratively using action research techniques (Hopkins, 1993). The Project Director[11] and Assistant Project Director[12] decided on a body of literature in the areas of bilingual/ESL education, Whole Language, first- and second-language acquisition, and language and literacy methods to be read by teachers. Teachers read assigned articles and reflected on them by writing in their journals. They participated in seminars to discuss and reflect on

[11] See Appendix A for a job description of the Star Schools Project Director.
[12] See Appendix B for a job description of the Assistant Project Director

their understanding and application of these new theories (see Appendix C for a list of suggested readings. It should be noted that this list does not limit other readings related to bilingualism in which teachers might be interested). During Year Two, the list was revised and refined (see Appendices D & E). We also used ethnographic techniques[13] to collect descriptive data. These data were used to build case studies, including individual teachers' reflections and application of theories to actual practices with deaf children (see Appendix F for an example of an ethnographic form).

Selection of Participants

Figure 2 illustrates a level of interaction among students, parents, and professionals. All participants play an important role in contributing to the Star Schools project.

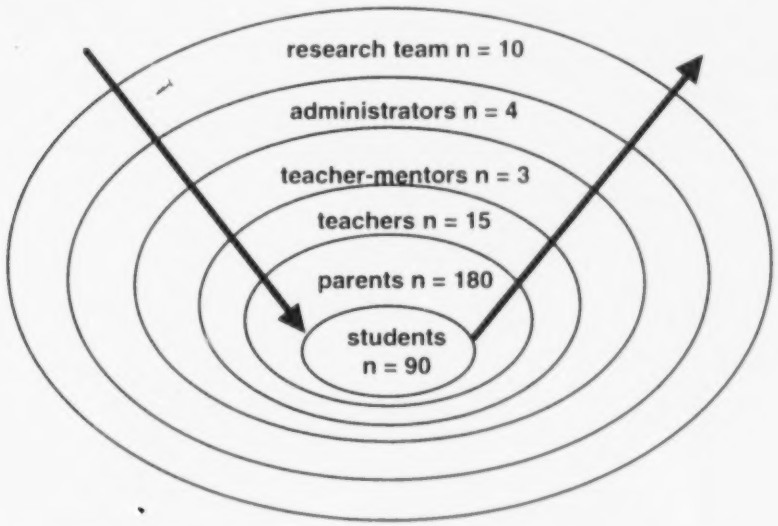

Figure 2: Level of Interaction among Students, Parents, and Professional

Educational Research Team.[14]. An important component of the project was the establishment of a core group of educational experts to discuss, implement, and function as peer reviewers for the project goals. Ten professionals, each having more than 20 years of experience in deaf education, were selected. Of these experts, five were deaf, five

[13] Ethnographic techniques such as analyses of learning logs, observations of teachers by mentors, observations of teachers by teachers, teacher self-analysis of classroom language use, and videotapeing of teachers in the classroom were used (see Moll & Diaz, 1985 for an excellent review of microethnographic studies of ethnically mixed and bilingual classrooms). In this report, we include only analyses of the teacher learning logs.

[14] See Acknowledgments for the list of members of the educational research team.

hearing;[15] eight were white, one was African-American, and one was Native American. Collectively, they represented specific areas of expertise such as teaching, language and literacy development, multiculturalism, language assessment, curriculum, language planning, and bilingual/ESL education and worked at teacher-training programs, residential schools, and day programs for deaf students.

Administrators. Five state school superintendents agreed to participate in the five-year project (see Appendix G). During Year One, two principals from each state school were involved in scheduling weekly seminars and giving teachers release time to observe other classrooms.

Teacher-Mentors. Year One teacher-mentors were selected in each participating school (NMSD and TSD). One teacher-mentor met at NMSD with the Project Director to discuss which theories should be covered in the weekly seminar. The teacher-mentors from both schools had extensive experience teaching deaf children. One mentor was deaf and two were hearing. The teacher-mentors were fluent in ASL and English. The Project Director met with the New Mexico teacher-mentor three or four times a week and with the Texas teacher-mentors once a month. The teacher-mentors duties included: (1) working with the Project Director to select readings, (2) distributing the readings to the teachers, (3) facilitating the weekly seminars with the teachers on their critical reflections of the readings, (4) collecting the typed reflective journals, and (5) gathering the evaluation data concerning teachers' judgments of the readings at the end of each semester.

The Teachers. Fifteen teachers participated in the seminars over the 1997-98 school year. The teachers taught in levels from preschool to fifth grade. Eight teachers were from the New Mexico School and seven were from the Texas School. Administrators selected some teachers; others volunteered. We attempted to recruit a balance of deaf and hearing teachers from diverse backgrounds; however, most teachers in early programs for deaf students today are white and hearing (Andrews & Franklin, 1997). We were able to recruit five deaf teachers and 10 hearing teachers. Fourteen teachers were Caucasian, and one was Hispanic. Their years of teaching experience ranged from one to 23 years. Seven participants had Bachelors degrees, seven had Masters degrees, and one had a Ph.D. Teachers varied in their ASL and English skills. All teachers had expressed interest in improving deaf students' language and literacy learning. They received a stipend to participate in the grant. Teacher background variables are shown in Table 2.

[15] Education reform in bilingual education for deaf students is best operationalized by a balanced team of deaf and hearing professionals.

Table 2: Background Characteristics of Teacher Participants (n = 15)

Age	Mean = 36 years
Gender	14 females, 1 male
Ethnic Background	14 Caucasian, 1 Hispanic
Hearing Status	5 Deaf, 10 Hearing
Number of Years Teaching	Mean = 7 years
College Degrees	7 = Bachelors, 7 = Masters, 1 = Ph.D.
College Major	1 deaf education, 2 elementary education, 3 special education, 4 psychology, 5 communications, and 6 had two majors (combinations of above)
State teacher certification	100 % were state certified
CED certification	9 had CED certification; 6 did not

Parents and Residential Staff. Parents and residential staff were included in the study because they were very close to the daily activities of their children and had strong emotional attachments to the students. During Year One, parents and residential staff received a newsletter about the progress of the project, including language and literacy ideas for the home and the residential services. Parents were also invited to the teacher seminars. Future plans for the five-year project include a bilingual/ESL training package for parents and residential staff (see Appendix G).

The Students. We believe NMSD and TSD represented the changing demographics in deaf education programs today. Each had more than 50 % of non-Anglo children, specifically those of Hispanic, African-American, and Native American heritage. Deaf children, especially of Hispanic and Asian heritage, come from homes where English is not used and, thus, represent a challenge for educators today. Any omission of the needs of these multicultural children would not be realistic or appropriate because nearly 44 % of deaf children enrolled in schools today are non-Anglo (Allen, 1997).

Ninety deaf children from preschool through fifth grade participated in the project. These children's teachers participated in the Star Schools project seminars. Students represented various hearing losses and ethnic and family backgrounds. Detailed background characteristics of participating students will be provided in future reports.

Procedures

Description of the Weekly Star Schools Seminars

The weekly seminars began in October of 1997, and a total of 36 hours of training was provided. Teachers received seminar readings one week before they met and then wrote a two-page reflective paper in which they noted critical reflections about what they had learned and how they would apply this information to actual classroom practices. The

teacher-mentor facilitated the two-hour weekly discussions where the teachers shared their reflections, asked questions, and stated their opinions. During these discussions, many complex issues related to language learning and language teaching emerged (see Appendix H).

For example, one session centered on the work of Stephen Krashen (1995, 1996), a second-language theorist. Krashen made the distinction between language acquisition where children extracted rules on their own and language learning in which the teacher provided direct instruction of rules. One teacher in the project commented that she had changed her teaching methods after reading Krashen's article. She decided that instead of teaching rules for article use in English, she would provide her students with a list of sentences that had articles. Then she had the children extract the rule for article use by themselves.

Teacher Exchange

An important part of the Year One study was the teacher exchange component. During the 1997-98 school year, teachers in the study traveled to other participating schools to observe in classrooms. They also participated in other schools' seminars. As a result, teachers from both schools could discuss what they had learned. Thus, discussions took place not only within the schools but among teachers in both schools. After each visit, the teachers provided an ethnographic observation summary and shared it in their seminar groups (see Appendix F for an example of an ethnographic observation form). This exchange of information was considered important to the overall purpose of the first-year study.

Main Findings

Figure 3 shows the results of our "teacher judgment" assessment. Teachers were asked to rate the weekly readings across three ranges: very relevant (3), somewhat relevant (2), and not relevant (1). Teacher judgment ratings were completed twice during the 1997-98 school year. For example, in December, the teachers evaluated the first eight seminars, and in May, they evaluated the remaining 13 seminars.

Research Question 1

The first research question asked how teachers rated the bilingual/ESL readings over a full year. We collapsed the means of teacher ratings over three points in time: the beginning sessions (sessions 1-6, $x = 2.6$), the middle sessions (sessions 7-12, $x = 2.59$) and the ending sessions (sessions 13-18, $x = 2.8$). Our data showed that teachers rated the end sessions higher than the beginning or middle sessions (see Figure 3). A slight dip

(.01) in the middle sessions may have been due to teachers' feeling overwhelmed by the amount of readings and paperwork required. However, all of the ratings were well above 2.0, which signified that they considered the readings as 'very relevant' to their teaching.

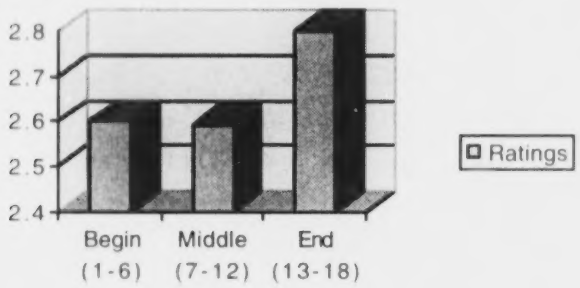

Figure 3: Collapsed Means of Teacher Ratings of 18 Seminars

Research Question 2

The second research question asked what bilingual/ESL readings the teachers rated as most relevant. Using Table 3, we took the individual mean scores over each seminar session and collapsed them in Figure 3 to rank the reading topics based on the 15 teachers' evaluations.

Table 3: Topics/Readings Ranked by Teachers

1. Concepts of Audism, Hearization; Parent Involvement	Nover (1993, 1995b); Freeman & Freeman (1994)
2. Theories of Jim Cummins and Brian Cambourne	Baker (1995), Cambourne (1988)
3. Jim Trelease's stages of Read Aloud; Stephen Krashen's theories	Trelease (1995), Krashen (1995)
4. Whole Language; L1 and L2 acquisition; "hidden curriculum"	Freeman & Freeman (1994), Collier (1995), Wink (1997)
5. Jim Trelease's description of Read Aloud	Trelease (1995)
6. Myths about L1 and L2 acquisition; Collier's social language and academic language;	McLaughlin (1992), Collier (1995), Freeman & Freeman (1994)
7. Fostering L2 acquisition; Stephen Krashen's theories	McLaughlin (1995), Krashen (1995)
8. L1 and L2 acquisition; Environmentalist versus Nativist theories	Ovando & Collier (1985), Short (1997), Freeman & Freeman (1994).
9. Factors influencing L1 and L2 acquisition	Freeman & Freeman (1994).

See Appendix C for a more detailed description of these concepts and reading reference sources discussed in the staff development seminars.

Research Question 3

The third research question asked what background variables of the teachers affected their judgments. We ran a correlation to determine which of six background variables affected the teacher ratings of the seminars: hearing versus deaf status, years teaching, degree, major, CED certification, and the school where the teachers were working. This analysis showed that two variables, years teaching and CED certification, were statistically significant ($p < .05$). That is, those teachers with the most years of teaching experience and those who were CED certified tended on the average to rate the seminars higher with less variability and more consistency. In contrast, teachers who had taught fewer years or who were not CED certified tended to rate the seminars with more variability and less consistency. This was not a causal relationship. That is to say, high ratings were not caused by teachers who had CED certification or more years of teaching experience but that in this study there was a strong relationship between these variables.[16]

Research Question 4

Research question 4 asked how teachers grew in their beliefs about language acquisition and learning over a full year. Our final research question measured the teachers' growth in their understanding of bilingual/ESL issues presented in the seminars. We used a case study approach in addressing this final question. This involved the analyses of more than 700 pages of reflective journals written by the teachers. The reflective journals were written reflections of what teachers learned from their readings as well as their attempts at applying bilingual/ESL concepts to their everyday teaching of deaf students.

Analysis of Reflective Logs

From the teachers' reflective logs, we gained two products. The first was teachers' stories, reflecting their growth in learning about bilingual/ESL concepts. The second product was a collection of practical methods and activities ("Best Language Teaching Practices") that teachers created and used in their classroom during Year One of the Star Schools project. These were actual methods and activities teachers created based on their reflections of the bilingual/ESL theories, first- and second-language acquisition, Whole Language, and language and literacy practices in the weekly seminars. We will use this collection for Year Two of the project, when teachers will revise and refine them. We also

[16] Discussion of Research Questions 1-3: It could be reasonably argued that we had a built-in bias for our ratings. First, teachers were paid to participate in the seminars. Most were representative of those teachers who supported bilingualism for deaf children. On the other hand, the purpose of the teacher evaluations was to give them the opportunity to reflect critically on ideas presented in the seminars and to determine if, indeed, this bilingual research base was relevant to their teaching of deaf children.

plan to disseminate these "Best Language Teaching Practices" through the Star Schools Year Two Project Report.

First Semester Teachers' Stories

We collected teacher reflections, which we called "teacher stories," in the learning logs (e.g., Carter, 1993). Some teachers found particular seminars to be "painful" as they began to examine and re-examine their beliefs about how deaf students acquire language and literacy. One teacher mentioned that examining her belief systems was frustrating and confusing at times but that doing so enabled her to interact with deaf students in a different manner than before. Other teachers asked themselves fundamental questions about how deaf students were acquiring ASL and English in their classrooms.

The teachers' reflective journals gave us rich data on what the teachers were learning from the seminars and how they were incorporating this information into their daily lessons. These teacher stories reflected language teaching activities in the classroom that were grounded in first- and second-language acquisition theories. The stories showed how beliefs became behaviors in the classroom and how teachers reflected on these beliefs by critically examining their behaviors. In the seminar meetings, teachers discussed the various theories and ways to implement them in the classroom.

We highlighted teachers' reflections from the first semester of reflective journals. This represented the intervention halfway through the year. Teachers were lead to reflect critically on concepts they had learned in Seminars 1 through 7, including concepts such as myths about second language (L2) acquisition, stages of Read-Aloud to children, learning strategies, methods for L1 and L2 acquisition in bilingual and ESL classrooms, Stephen Krashen's (1995) second language (L2) theories, Jim Cummin's (1984) L2 theories, and Environmentalist versus Nativist theories of L1 acquisition. Following are some of the teachers' insights.

One teacher realized that she needed to increase her students' opportunities to learn English.

> Deaf children cannot learn English as a second language in the usually expected way because it is not their first language or not a visual language. I had thought ASL would help them to learn a second language, but it will not work because they tend to depend on their first language for translating. I never thought much about English acquisition for deaf children. I learned that it is possible for them to have English acquisition while they are having their first language being developed. I learned that I must provide appropriate activities with the appropriate environment for them to acquire English in reading and writing without relying on ASL. After seeing what percents of my time using ASL and English were, I realized that I need to increase English activities for them to acquire English.

Another teacher realized she was teaching part-to-whole rather than whole-to-part as current first and second language strategists recommend.

> I am still struggling with my students in finger-reading. They are so motivated to learn new words and want to be able to finger-spell and write them on their own. They still want me to finger-spell each letter to help them memorize new words. I used to do that but not anymore. I will just finger-spell out the word again and again until they catch it. It was frustrating for some of them but they are starting to get used to it. I noticed that they remember words better that way. Some of my students still get frustrated, but with time, they may learn to read it as a whole with a lot of continued practice.

Another teacher realized that deaf children were delayed in language acquisition because they acquired it later in life than other children.

> Mayberry's article on first language acquisition after childhood reminded me...that most deaf children are very delayed in all aspects of language development because of acquiring a first language late in childhood.... My guess is at least 80% of deaf children are in this boat.... I was inspired to create a more "acquisition-rich" environment in my classroom.... I was struck by the importance of exposing them to more English that has real meaning for them, and I want to create more situations in the classroom where they are exposed to meaningful and comprehensible English.

This same teacher changed her beliefs about daily storybook reading to her children. Before the seminars, she thought reading aloud to her students was frivolous, but later she realized it should be a cornerstone of her reading instruction.

> Reading about factors that created life-long readers was fascinating. After those readings, I went out and bought my kids their own books. I bought comic books for them to keep. I once thought that reading to the students was slightly frivolous and not very beneficial to their acquiring English. I've completely changed my thinking in that regard.

Another teacher realized the importance of increasing finger-reading as a bridge to reading English.

> I started to think about how I present information and which language I use. What did I do with my students? I have the students read English in printed text daily on the dry erase board. The students always want to know what I am writing. I always ask the students, "Who can read? Who wants to try to read?" Most students want to give it a try.... Finger-reading and reading books daily have impacted my teaching.

Still another teacher began to understand the difference between acquiring languages naturally and being taught languages in an instructional setting. She realized that deaf children needed both in a Whole Language setting.

> I learned...about acquired and learned languages. I really had not thought much about there being a difference before. Now, I realize how important it

> is to provide students with the opportunity to acquire English and ASL in the school setting and at home. I feel good about the direction my teaching has already taken--toward the whole language/thematic approach--because I think this approach is very conducive to language acquisition. It tends to focus on the message, rather than small parts of grammar that make up a sentence.

Reflecting on his practice, this teacher went on to say:

> I realize that I do not require my students to depend upon the English in class enough. Too many times, I do not give them enough time or hints so that they can decipher the meaning of written directions or question themselves. If I continually give them the ASL after showing them the English, they have no reason to actually read the print themselves. They need to be more independent readers of English. I need to make sure that I step back a bit and give them the opportunity to translate for themselves. I need to check to see that the input is comprehensible, and then let them have a go on their own. This way, they will build their reading skills and begin to have more confidence in themselves as readers of English.

Further, he critically reflected on the whole process.

> It is often hard to draw a parallel between some of the ESL concepts and deaf education. Sometimes the comparisons between spoken and written language cannot be made. There are often factors involved (i.e., motor skills) which make the two completely different skills.

Another teacher concurred. She said she was now more aware of the differences between language acquisition and language learning.

> I am more cognizant of the difference between language learning and acquisition. I have also been reminded that it is easier to learn a language (first, second, or even third) when it is acquired through exposure and comprehensible input and not expect output immediately. Because of this, I challenge myself to find more activities for English acquisition.

Still another teacher realized the importance of family input and how she could restructure her classroom to include more parent activities.

> The readings have made me keenly aware of the important role of the home and early experiences. This has impacted my planning and I plan to develop ways to involve the parents more than just sending home a weekly letter and homework.

This teacher went on to say that she wanted to include more English print activities in the class. She also reflected on the level of English, realizing she could make her English level one notch above the child's functioning level to challenge the students and raise their level of English.

> The readings impacted my teaching by making me even more aware of looking for opportunities to add print to activities or have the students rely

> on the English directions and print. I value reading and read several books a day tied to the thematic unit. One additional book is used by the students to develop independent reading skills (Krashen's input + 1 or providing input a notch above the students' current level).

Another teacher recognized that learning a second language is not fast and easy. She became more aware of how she presented English to her students.

> The very first myth that "children learn second languages quickly and easily" and the evidence in the article to support it, really shook my thoughts that this mission was going to be much more complex than I imagined. As a result, I am becoming even more conscious of the way we read books, how I introduce books with lots of new vocabulary, how I design worksheets, projects and related activities and the strategies I use.

Many teachers became aware of how much ASL and how much English they were providing the children each day (see Language Distribution in Appendix I). One teacher realized that she must increase her students' exposure to English through finger-reading and finger-spelling, and reading and writing activities as well as encourage families to do likewise.

> Since my participation in the grant meetings, I have become aware of how I use the two languages in the classroom and how my students are acquiring two languages.... I plan when and how I use English in the classroom...finger-spelling, journal activities, and reading activities. I sent some information and tips to families about using finger-spelling, reading and writing, and how they are critical in their child's development of literacy.

Another teacher recognized the importance of finger-reading and finger-spelling too.

> One area I have learned a lot about and have focused strongly on this semester is finger-spelling. I feel finger-spelling is the link for deaf students to move into using English. I have begun to finger-spell many routine words like, lunch, library, art, dorm, homework etc. I have seen these words appear more in my students' writing. I have also seen my class play with trying to finger-spell the words themselves.

This teacher went on to comment on ways to translate print so that children understand.

> Translation. I know this is a very complex skill, however, not having much experience, I never realized how totally ineffective, and absurd it is to ask a student to read word for word print. I know the goal is comprehension, but my question was, "When do they read?" I feel I have a bit more of the answer. Is the big question answered? No...but I believe we are making progress.... In reading, now I focus on different ways to read a book. For example, looking at the pictures, describing the events on the page and recalling what is going on in the story before the student even looks at the

> print. Then we tackle some of the unknown words and discuss their meaning.
> Another teacher mentioned that she needed to model more ASL every day.

> I am more aware of the time I spend on the two languages. I have focused more on ASL during certain times of the day. I encourage and try to model more ASL during the "sharing" session in the morning. Our read-alouds (I try my best ASL), with more discussions using the pictures to involve and encourage more participation for all my students. I have reflected on my teaching and have used more strategies to improve on ways to help the students.

Several teachers mentioned that they wanted to provide more of a balance of language acquisition (social language) and language learning (academic language) activities in school.

> I spend more time paying attention to providing a balance of language learning and language acquisition activities.

Another teacher realized that no one really knew how deaf students learned English, but he realized the answer lay in observing how his deaf students got meaning from print. He said,

> I tend to pay more attention to how I present English visually. I try to put myself in the student's position and analyze how the child would see it and what kind of meaning they may pull from it. For example, one of my students recently read a sentence that he had dictated for a picture several weeks ago. It was not his writing, none of the words were sight words he knows, and yet, he was able to read it because he remembered the activity and the experience that the writing was related to. I now try to provide a variety of experiences that the students will remember as a reference for meaning in their reading and writing. I am learning that this is the primary way that I know how to provide meaning for print that may seem otherwise unattached and "frozen."

Second Semester Teachers' Stories

We highlighted teachers' reflections in the second semester. During these sessions, teachers discussed factors that influence L1 and L2 learning, e.g., Cambourne's (1988) model of language learning; Krashen's (1985) notion of "comprehensible input," Collier's (1995) discussion of social language versus academic language, Freeman and Freeman's (1992, 1994, 1998) concepts of Whole Language, features of positive language learning environments, Cummin's (1984) theory of "common underlying proficiency," Wink's (1997) notion of the "hidden curriculum" at school, how parents promote children's achievement, and teacher beliefs such as "audism" and "hearization."

In discussing Cummin's (1984, 1989) notion of building a child's second language by using his or her dominant language, teachers astutely pointed out that most of their students did not have competence in any one language.

> Most of our students do not have native competence in any language. This must effect language transfer as well as background knowledge, metalinguistic skills, linguistics skills in L1 and L2 and general information awareness.

Even though this was true, teachers agreed that for most children, their ASL skills outweighed their English skills.

> I believe that the transfer from L1 to L2 is not always what we expect due to the language proficiency in one language not being equal to the second language. For our deaf students, their L1 (often ASL) skills outweigh their L2 (English) skills. It is very important that students be given information in their primary language. The second language needs support from information given in their primary language. Second language learners with no schooling in their first language may have difficulty making sense of English since they lack the background knowledge in their first language.

Teachers also noted that expectations for deaf students by teachers are often low. After reading about Vygotsky's (1996) concept of "zone of proximal development," (see Dixon-Krauss, 1996) one teacher noted:

> Vygotsky's zone emphasizes the necessity of students receiving information, grammatical structures, vocabulary etc., at a level beyond their current level. Because expectations are typically lowered for deaf students and because the use of complex linguistic structures in ASL are not natural to many teachers, deaf kids are often not exposed to these higher forms of language and information. Therefore students are not being "pulled up" as they need to be in order to develop linguistic, cognitive and academic skills.... We also do not know how much sophisticated ASL students are exposed to on a regular basis and what their current linguistic skills actually are.

Some teachers suggested that a "hidden curriculum"[17] often exists in schools. That is, the values of the administration and teachers are in conflict with the background and values of the students. Teachers also noted that families have values in conflict with their deaf children's values. Some called these conflicts "audism" or "hearization," meaning that the values of hearing society (i.e., talking, hearing, and reading and writing English) are imposed on the Deaf community.

> One of the most blatant forms of "audism" is that ASL is not as good as English or that English fluency is equated with intelligence. Deaf children and adults experience, and often internalize this attitude...hearing aids and

[17] "Hidden curriculum" involves the unexpressed perpetuation of dominant culture through institutional processes (See Wink, 1997, p. 43).

> emphases on "taking advantage" of residual hearing are often at the expense of developing the strength of the child.
>
> At the oral school I attended, there is definitely a hidden curriculum suggesting that English is better than ASL, and speaking is better than signing. This is evidenced by the fact that hearing people spend a great majority of their work day conversing in spoken English; many people use SimCom (it has become a habit for me since I moved here; there are few adequate role models for our children; there are currently no ASL classes offered for the teachers; no incentive to improve ASL skills (i.e., higher pay for higher SCPI scores); there are few deaf adults in teaching or administrative positions; and during the majority of our staff meetings and workshops there is an interpreter available.

One teacher noted the strain between deaf and hearing teachers working through these conflicts in the "hidden curriculum."

> One of the saddest and biggest detriments to the Deaf community is the "Us Against Them" mentality. It is hard to say without stepping on toes! However, the deaf adults who carry this attitude (not all do) rip the community apart. I feel this is very hidden and embedded in deaf students especially at residential schools. The "we are deaf, they are hearing," attitude. Us against them, instead of me as a strong independent deaf person, me as a strong independent American. In order to work together for the betterment of the deaf children in our society, we need to work together to be aware of our feelings. For what we portray to our children impacts what they learn.

Another teacher noted that the hidden curriculum was also found in homes.

> Thinking about my own Special Needs classroom, I think there is a "hidden curriculum" which manifests itself in a parental attitude of "here is my kid, fix him!"

One teacher reported, an example of hearization in a Native American grandfather's statement that the Medicine Man told him his deaf grandson would "grow out of it" (his hearing loss) before he was a teenager.

One deaf teacher found the discussion of "hearization" to be personally painful.

> In retrospect, my experiences were unforgettable, painful, and indescribable, so I have plenty of examples of "audism" and "hearization." ... It was the first time that I felt "inhuman." When I was thirteen, I was sent away to an oral school. I was told that we were forbidden to use our hands nor any kind of gestures and required to use our voice at all time... I asked a boy about dorm rules.... The boy did not understand me... I moved my lips.... I simplified words.... I decided to point...and gesture 'sleep.' One of the staff caught me.... I was punished.... I did not understand what I did wrong.... I felt inhuman and there are not other words to describe it.

Some teachers felt that schools focused too much on English and not enough on ASL as an independent language. One teacher noted this in the preschool especially.

> The focus on audiological concerns in the preschool indicates "audism." It worries me about English access.

> Hearization is a college professor in audiology who stated that all a deaf/hard of hearing child needs to succeed in school are properly fitted hearing aids and a well designed classroom environment.

> An example of audism is selecting a postlingually deaf child as a narrator in the Christmas pageant who can speak his lines clearly. This particular deaf man felt he was selected as a "shining example" of the kind of student the school produced as a result of lots of speech training and emphasis on oral methods. He felt bitter about this "con job" and felt used by his school for many years later.

Another teacher made this comment.

> Programs focus on early intervention for use of whatever limited residual hearing there is rather than accessible language exposure. Early years of education are dominated by hearing professionals, often with no or limited ASL skills and it is often only until high school that Deaf teachers appear more frequently. It sends a message along the lines of "we'll try all we can to develop these hearing skills and after so may years we'll compromise.

Still another teacher said this about "audism:"

> The child who can function as a hearing person in the hearing world is praised, while the child who cannot function as a hearing person, is looked at and treated as inferior.

Still another teacher elaborated on "audism,"

> I experienced "audism" working in a large school for the deaf. The school was primarily dictated by hearing officials who enrolled more and more deaf students promising to improve English skills. The Deaf community wanted education via ASL, however, hearing parents threatened to pull their kids out which would cut state funding. Therefore the school continues to ignore the Deaf communities wants and needs.... The larger society believes speaking and hearing is better.

Almost all teachers said that parents should be more informed about what was happening at school. Parents can also benefit from more information about Deaf culture and more classes in ASL. Parents can always improve their communication skills with their children. Teachers said that parents can have higher expectations for their deaf children to succeed. Parents, teachers noted, can also be made to feel a part of the larger Deaf community (as parents of deaf children).

Teachers proposed many positive ways to bring Deaf cultural values into the classroom. These included modeling Deaf pride and self-acceptance by having a deaf adult and a hearing adult in each classroom, displaying both ASL posters of signs and English print in the classroom, sharing experiences of adults growing up deaf, inviting deaf storytellers to class, educating students about Deaf culture, using books with Deaf characters, and using books with sign language in them.

Teachers were asked to share two important insights they had acquired in the second seminar sessions related to language learning and their deaf students.

> The critical role of establishing first language competence (including metalinguistic ability) for deaf children...second insight...discussing ASL as important for its own sake (not as a tool for developing English competence) and giving it a dominant role in the educational environment.

> I noticed that balancing language is very important. Using both ASL and English varies from student to student, and classroom to classroom.... I will continue to support my students ASL strengths, and continually expose them to comprehensible English input.

> Cambourne's model of learning (8 models) certainly helped me understand the different models of learning children receive in the classroom.... It also helped me plan my lessons effectively with activities and goals to insure that students will receive both first and second languages.

> I read a lot of articles that discussed how students acquired second language. I consider it an excellent way of acquiring English as a second language. The articles I read did not mention finger-spelling but they got me to think about how I communicated with my students.

> The personal insights are instruction from whole to part for both ASL and English learning acquisition/learning purposes, Cambourn's conditions for learning and parent involvement.

> One important insight I had this semester is the real significance of social language. It really is the motivation for children to learn to communicate.... Another important insight I have had is the importance of modeling and demonstration.

> A lot of the readings validated my philosophies and techniques and helped organize and describe aspects of my beliefs and methods.

The training helped some teachers become more aware and critical of their attitudes toward deaf people.

> I have realized that just because I chose to be a teacher of the deaf, and because I know more about the deaf than the average hearing person does; this does not guarantee that I have not developed "audistic" behaviors of my own. I am doing a lot of personal inquiry on this subject.

The Star Schools training supported teachers in their beliefs about bilingualism and encouraged them to continue their own development.

> My personal goal or "next step" in implementing a bilingual classroom to support what I have learned is to improve my ASL skills.... I feel it is my responsibility to act as a language model for my students...to continue to learn about ASL and increase my proficiency.

Another teacher characterized the seminars as "awakenings."

> I felt my biggest awakening was related to how much I have been ignoring ASL.

Discussion and Summary

From September 1997 to May 1998, we completed Year One of our five year project. During this time, 15 teachers from two state schools for the deaf participated in seminars where they named their beliefs, critically reflected on them through written reflective journals and discussions, and acted on these beliefs through classroom practice. Our results present teachers' evaluations of seminar topics. Our case studies of teachers' stories demonstrate the process that teachers go through in learning this new information. It is important to note that this process takes time. It cannot be done overnight, nor can it be done through reading alone. Such learning is an interacting and mediating process involving the educational research team, administrators, mentor teachers, teachers, parents, residential staff, and students (see Figure 2).

Future Five-Year Plan

Student Evaluations

We are currently gathering data from the students' performance on standardized and non-standardized tests to determine if our staff training has resulted in higher achievement; however, it is too early in the project to report these scores. Our plans include gathering Stanford Achievement Test for Hearing Impaired Students (SAT-HI) scores and written language samples from all students who are in the participating teachers' classes. We must note that data from other studies show that second-language acquisition is a long process, sometimes taking five to seven years to show actual data on score improvement (Ovando & Collier, 1998). However, it is expected that these test scores and student language samples will give us an indication of student growth.

Years One and Two

First-year (Levels 1 & 2) staff development seminar questions and readings (developed for the New Mexico and Texas Schools for the Deaf) are found in Appendix C.

In Year Two (Levels 3 & 4), we will continue our staff development and focus specifically on bilingual/ESL strategies and assessments. Appendix J provides a protocol for a descriptive syllabus (also see Appendix K). During Year Two (1998-1999), we will also initiate staff development at the Kansas School for the Deaf. Appendix D includes a protocol for this syllabus and staff development training which has evolved during its year of implementation at the New Mexico and Texas Schools for the Deaf. This represents a changes and further development of the program.

Teachers at TSD and NMSD will participate in Year Two (Levels 3 & 4) of the Star Schools training. Whereas the first year focused on a survey of current theories, the second year will allow the teachers to experiment with language teaching methods and strategies and language teaching assessment tools. These teachers will create new data through action research techniques. They will relate what they learned from the first and second years using the bilingual/ESL framework described at the beginning of this paper. Table 4 gives our staff development plan for the full five years of the project.

Table 4: Staff Development Plan (1997-2002)

Year	**Group/Schools**
Year 1: 1997-1998 (Levels 1 & 2) Year 2: 1998-1999 (Levels 3 & 4)	Group 1: New Mexico School for the Deaf and Texas School for the Deaf
Year 2: 1998-1999 (Levels 1 & 2) Year 3: 1999-2000 (Levels 3 & 4)	Group 2: Kansas School for the Deaf
Year 3: 1999-2000 (Levels 1 &2) Year 4: 2000-2001 (Levels 3 & 4)	Group 3: New Mexico School for the Deaf, Texas School for the Deaf, Illinois School for the Deaf, East North Carolina School for the Deaf
Year 4: 2001 (summer) (Levels 1 & 2) Year 5: 2002 (summer) (Levels 3 & 4)	Group 4: Summer Language Teaching and Language Learning Institute at the New Mexico School for the Deaf
Year 4: 2000-2001 (Levels 1 & 2) Year 5: 2001-2002 (Levels 3 & 4)	Group 5: Kansas School for the Deaf

Note: NMSD, TSD, and KSD will administer two training sessions (for two different staffs) for the purpose of research and to improve our staff training package.

Each program of staff development training takes two years (four semesters) to complete. The first year (Levels 1 & 2) centers on a survey of current theories on bilingual/ESL education, Whole Language, first-and second-language theories, language and literacy practices (see Appendix C). The second year (Levels 3 &4) focuses on applied language teaching methods and strategies, and language teaching assessment tools in the classroom (see Appendices J & K). With continued project support, each participating school is responsible for continuing the training after the complettion of two-year staff development program.

We are also planning a national summer language learning and language teaching institute to train teachers selected from other schools across the nation. This summer institute will be based on our research developments during the first three years of the project as we continually refine and revise our staff development plan to keep up with current literature in the field of bilingual/ESL education. More information will be available at a later date.

Final Notes

Traditionally, researchers have compared deaf students' literacy learning to that of their hearing peers. For instance, in Introduction to the Special Issues on Literacy, Paul (1998) restated the familiar supposition that "Many 18 to 19 year old deaf and hard-of-hearing students are performing no better than the average 9- or 10-year-old hearing students" (pp. 177-178). This kind of comparison is incongruous because it compares hearing students, whose first language is English, to deaf students, who attain English as a second or foreign language (e.g., Charrow, 1975). In other words, it may be more appropriate to compare the literacy scores of hearing children learning English as a foreign language to deaf students learning English. In our opinion, this may provide teachers with more accurate data as well as helpful insights into the language learning processes of their students.

In Year Two (Levels 3 & 4), our project will examine Lyon's (1996) Developmental Threshold Model to measure the amount of bilingualism attained by our students (see Figure 1). In this way, we can compare deaf students attainment' of English compared to hearing bilingual attainment of a second language. For example, teachers can reconceptualize their students' bilingual language development as going from the Early Language Threshold, where they know signs/words and phrases in ASL and English, to the Potential Bilingualism Threshold, where they know simple sentences in ASL and words and phrases in English, to the Developing Bilingualism Threshold, where they know ASL at an age-appropriate level and know simple sentences in English, and finally to the last Threshold--Proficient Bilingualism, where they know both ASL and English at an age-appropriate level. By using Lyon's model, we can deepen our understanding of how deaf children develop bilingualism in ASL and in English.

Studies such as ours, which include teachers, are important because, while the bilingual-bicultural philosophy is advocated, there is little work on precisely what theoretical and practical knowledge teachers need for their everyday work with deaf children (Prinz & Strong, 1998; Strong, 1988b). As elaborated above, to many, a bilingual approach to teaching deaf students stops at simply using ASL for instructional

purposes (Padden & Ramsey, 1998). This is a gross oversimplification of the very complex task of providing quality bilingual education to deaf students. Introducing ASL into the classroom is only the first step. Admittedly, it is a big one given the educational establishment's resistance to hiring deaf teachers and providing ASL support for hearing teachers. We suggest that teachers need instruction in language teaching methods and strategies grounded in bilingual/ESL approaches, first- and second-language theories, Whole Language, ASL development, and English literacy development approaches. Knowledge and application of these theories and methods is critical in order to meet the unique language learning needs of deaf students in a bilingual setting. That is why we focus on intensive staff development.

Outcomes of our study have relevance for inservice teachers and preservice teachers. Administrators interested in the bilingual-bicultural approach may find our list of readings and theoretical and practical goals helpful in providing training for their teachers (see Appendices D, E, & K). At the preservice level, university teacher-trainers can assign the language learning and language teaching literature we have presented and require students to apply these concepts during their practicum and student teaching experiences.

We return to Joan Wink's (1997) application of the notion of critical pedagogy. Change and contradiction are fundamental to the educational process. It is not enough to accept the bilingual approach to language acquisition, language learning, and language teaching. Such concepts must be critically analyzed by the teachers who will use them. Further, teachers must respect and incorporate children's diverse cultures, backgrounds, histories, and experiences of growing up deaf in a hearing world (e.g., Christensen, 1993; Humphries, 1993; Parasnis, 1996). For deaf students, both language and culture can be applied to educational practices but only in ways that are critically analyzed by those who use them--the teachers.

APPENDIX A

Job Title: Project Director of the Star Schools Project

Site: New Mexico School for the Deaf

Department: Academic Support

Supervision: Reports to the Director of Instruction

General Duties and Responsibilities

The Project Director provides technical language planning consultation to NMSD's campus community and public education in New Mexico, as appropriate. Collaborates with program administrators and teachers in the development of bilingual education; second language acquisition; and appropriate curriculum, instruction, and assessment methodologies consistent with these areas.

The Project Director is responsible for the development, coordination, and management of the Star Schools Project as well as for providing overall leadership required for successful implementation of Star Schools project goals. He oversees project implementation at NMSD and other site schools (TSD, KSD, ISD, and NCSD). He is responsible for hiring staff and consultants to operate the Star Schools Project in consultation with the Star Schools Project Planning Committee.

Specific Duties:

1. Meets with director of instruction to coordinate language planning issues schoolwide.
2. Makes recommendations and provides resources to the director of instruction on staff development needs.
3. Participates on the NMSD's Instructional Improvement Committee.
4. Develops, coordinates, and supervises the Star Schools project (SSP).
5. Oversees budget operation of the Star Schools grant.
6. Supervises and evaluates SSP staff.
7. Trains key personnel for active participation in the SSP.
8. Maintains working relationships with other state schools for the deaf.
9. May investigate possibilities of applying for and receiving other grants specific to language and literacy needs of deaf children and necessary staff development.
10. Writes research articles for professional journals and makes scholarly presentations at national and international conferences.
11. Selects and organizes an advisory SSP group, including representation from New Mexico and Texas in consultation with the SSP Planning Committee.
12. Selects members/consultants for the SSP work group.
13. Sets agendas and facilitates SSP work group meetings based on meeting grant requirements and input from SSP group members and SSP Planning Committee.
14. Monitors SSP work groups in the areas of language/literacy assessment, staff development, involvement of parent/dorm staff, and technology.
15. Identifies, selects, and distributes resources related to the goals of the SSP grant (e.g., weekly seminars, work group meetings).
16. Develops purposes, guiding questions, and application assignments for weekly SSP seminars.
17. Evaluates the effectiveness of the overall SSP project.
18. Plans, develops ,and implements research by working collaboratively with SSP consultants.
19. May participate in the Star Schools project board meetings as required.
20. Participates in national/international conferences/workshops to ensure that information, research, and knowledge are current.

APPENDIX B

Job Title: Assistant Project Director of the Star Schools Project

Site: New Mexico School for the Deaf

Department: Academic Support

Supervision: Reports to the Project Director of the Star Schools Project

General Duties and Responsibilities:

The Assistant Project Director is responsible for assisting the Project Director in development, coordination, and management of the Star Schools Project (SSP). The Assistant Project Director is responsible for supporting the Star Schools Project implementation at NMSD, and coordinating SSP implementation at TSD and other site schools through communication with their Mentor/Trainers. The Assistant Project Director is a required member of SSP Work Group.

Specific Duties:

1. Meets regularly with the SSP Director to develop, plan and implement the goals of the SSP.
2. Provides feedback to the Project Director on project implementation.
3. Provides technical assistance and training support to SSP teachers.
4. Facilitates weekly seminars at NMSD.
5. Monitors weekly seminars at site schools.
6. Distributes training materials at NMSD and site schools.
7. Collects documentation at NMSD and other site schools. (e.g., learning logs, student writing samples, etc.)
8. Develops purposes, guiding questions, and application assignments for weekly seminars with the Project Director.
9. Reviews learning logs and summarizes main points from teachers' discussions at NMSD.
10. Provides feedback on teaching methods related to bilingual/ESL methodologies through classroom observations.
11. Identifies, implements and supports appropriate instructional strategies within a bilingual/ESL framework, provides technical assistance in establishing the SSP in other site schools.
12. Interprets for SSP Director as needed.
13. Participates in national/international conferences/workshops to ensure that information, research, and knowledge are current.
14. Some travel and flexible hours may be required on occasion.
15. Other duties as assigned by the Project Director.

APPENDIX C

Learning log goals and readings on bilingualism/ESL, Whole Language, first- and second-language acquisition theories, and language and literacy development approaches of Star Schools seminars.

Year One (Levels 1 & 2) : Learning Log Goals and Readings

Learning Log 1 **Theory goal:** • What are some myths about L2 learning? **Practice goal:** • How do deaf children learn to read?	McLaughlin, B. (1992). Myths and misconceptions about second language learning: What every teacher needs to unlearn (pp. 1-17). National Center for Research on Cultural Diversity and Second Language Learning Center for Applied Linguistics. 1118 22nd St. NW, Washington, DC 20037 (202-429-9292).
Learning Log 2: **Theory goals:** • What are the benefits of Read Alouds for hearing children? • What are the steps in Read Alouds? **Practical goals:** • How are Read Alouds different for deaf students? • How do you provide Read Alouds for deaf children?	Trelease, J. (1995). Chapter 1: Why read alouds? The Read-Aloud Handbook. Fourth edition. New York: Penguin Books. (pp. 1-26).
Learning Log 3: **Theory goal** • What factors foster second language development and L2 instructional strategies? **Practical goal** • How do you apply L2 principles to teaching deaf children?	McLaughlin, B. (1995). Fostering second language development in young children: Principles and practices (p. 1-11). Educational Practice Report 14. National Center for Research on Cultural Diversity and Second Language Learning Center for Applied Linguistics. 1118 22nd St. NW, Washington, DC 20037 (202-429-9292).
Learning Log 4: **Theory goal:** • What are the stages of Read Alouds for hearing children? **Practical goal:** • How can these stages be used with deaf children?	Trelease, J. (1995). Chapter 2: When to begin read aloud (pp. 27-59); Chapter 3: The stages of read-aloud (pp. 60-105). The Read-Aloud Handbook. Fourth edition. New York: Penguin Books.
Learning Log 5: **Theory goals:** • Describe L1 and L2 acquisition, methods of teaching, and strategies in bilingual and ESL classrooms. • What are the implications of the ESL standards for bilingual educators? **Practical goals:** • How do deaf children acquire and learn ASL and English? • What are the implications of ESL standards for deaf educators?	Ovando, C. & Collier, V. (1985). Bilingual and ESL Classrooms: Teaching in Multicultural Contexts. New York: McGraw Hill pp. 57-100. Short, D. (1997). Implications of the ESL Standards for Bilingual Educators. In NABE News, September 15, 1997, pp. 5, 12.

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Learning Log 6: **Theory goal**: • Describe Stephen Krashen's bilingual and second language acquisition theory. **Practical goals:** • Apply Krashen's notion of concurrent translation to teaching deaf children. • How does the bilingual approach interfere and/or support development of English as L2 for deaf children? • Increase awareness of amount of time teachers use ASL; amount of time they use English in class each day.	Krashen, S. (1995). Bilingual education and second language acquisition theory. In D. Durkin (Ed.), Language Issues: Readings for Teachers (pp. 90-129). New York: Longman.
Learning Log 7 **Theory goals**: • Compare two theories of language acquisition: Environmentalist vs. Nativist. • Define Krashen's Monitor Model. **Practical goals:** • Which of the two theories above are best suited for designing a bilingual framework for deaf children? • Apply Krashen's Monitor Model in your teaching of deaf children.	Freeman, D. & Freeman, Y. (1994). Chapter 5: What are the principal theories of second language acquisition? Between worlds: Access to second language acquisition (pp. 81-107). Portsmouth, NH: Heinemann
Learning Log 8: **Theory goal:** • Review all bilingual/ESL concepts presented in Logs 1-7. **Practical goals:** • List two personal insights from those readings and how you have related them to your teaching. • What changes would you recommend to the seminar training?	No new readings given.
Learning Log 9 **Theory goals:** • Which factors influence hearing L2 learners? • What factors influence how teachers teach L2 learners? **Practical goals:** • Using hearing L2 learners' case studies, compare their experiences to an L2 learner you know. • Using your deaf students, list several factors that predict and/or limit school success.	Freeman, D. & Freeman, Y. (1994). Chapter 1: Who are our English language learners, and what factors influence their academic performance? (pp. 11-29); Chapter 2: What influences how teachers teach? (pp. 30-46). Between worlds: Access to second language acquisition. Portsmouth, NH: Heinemann.

Learning Log 10 **Theory goals:** • How does learning take place in the explorer classroom? • Give an alternative view of language learning. **Practical goals:** • How can deaf children learn in an explorer classroom? • How does the alternative view of learning by Cambourne impact deaf children's learning?	Freeman, D. & Freeman, Y. (1994). Chapter 1: Who are our English language learners, and what factors influence their academic performance? (pp. 11-29); Chapter 2: What influences how teachers teach? (pp. 30-46); Chapter 3: How does learning take place in an explorer classroom? (pp. 47-65). Between worlds: Access to second language acquisition. Portsmouth, NH: Heinemann. Cambourne, B. (1988). Chapter 4: An alternate view of learning (pp. 28-42). The Whole Story: Natural Learning and the Acquisition of Literacy in the Classroom. Auckland: Ashton Scholastic.
Learning Log 11: **Theory goal:** • How does oral language learning transfer to literacy learning? **Practical goal:** • How does ASL transfer to literacy learning?	Cambourne, B. (1988). Chapter 5: Theory into practice I: Transfer-ability (pp. 43-80). The Whole Story: Natural Learning and the Acquisition of Literacy in the Classroom. Auckland: Ashton Scholastic.
Learning Log 12: **Theory goals:** • What are the linguistic processes in language acquisition? • What are the principle theories of second language acquisition? **Practical goals:** • Are the linguistic processes of language acquisition similar for hearing and deaf children? • How do these theories of L2 acquisition impact deaf children?	Collier, V. (1995). Language acquisition: An overview; Linguistic processes. Promoting academic success for ESL students: Understanding Second language acquisition for school (pp. 3-19). Jersey City, NJ: NJTESOL-BE.; Freeman, D. & Freeman, Y. (1994). Chapter 4: What do we acquire when we acquire a language? (pp. 66-81); Chapter 5: What are the principal theories of second language acquisition? (pp. 81-106). Between Worlds: Access to second language acquisition. Portsmouth, NH. (p. 121).
Learning Log 13 **Theory goal:** • How do the social and cultural processes of language development affect cognitive development and academic development? **Practical goal:** • How do they affect deaf children's cognitive and academic development?	Collier, V. (1995). Social and cultural processes (pp. 21-30); Cognitive and academic development (pp. 31-41). Promoting academic success for ESL students: Understanding Second language acquisition for school. Jersey City, NJ: NJTESOL-BE.
Learning Log 14 **Theory goal:** • How do teachers provide access to L2? **Practical goal:** • How do teachers provide access to L2 to deaf children?	Freeman, D. & Freeman, Y. (1994). Chapter 6: How do explorer teachers provide access to second language acquisition? (pp. 108-136); Chapter 7: How do explorer teachers focus on learners and their strengths? (pp. 137-164). Between Worlds: Access to second language acquisition. Portsmouth, NH.

Learning Log 15 **Theory goal:** • How do teachers focus on learners' strengths? **Practical goal:** • How do teachers focus on deaf learners' strengths?	Nover, S. & Moll, L. (1994). Cultural mediation of deaf cognition. In Post Milan: ASL and English literacy: Issues, Trends and Research. Washington, DC: Gallaudet University College of Continuing Education. Collier, V. (1995). Social and cultural processes, cognitive and academic development. Conclusion (pp. 21-42). Promoting Academic Success for ESL students: Understanding second language acquisition for school. Jersey City, NJ: NJTESOL-BE.
Learning Log 16 **Theory goal:** • How do teachers celebrate students' first language and culture? **Practical goal:** • How do teachers celebrate deaf students' first language and culture?	Freeman, D. & Freeman, Y. (1994). Chapter 8: How do explorer teachers celebrate students' first languages and culture? (pp. 165-200). Between worlds: Access in second language acquisition. Portsmouth, NH: Heinemann. pp. 165-197. Baker, C. (1995). A parents' and teachers' guide to bilingualism (pp. 35-60). Clevedon, England: Multilingual Matters.
Learning Log 17: **Theory goal:** • How do community attitudes and the politics of the "English only" movement affect bilingual students? **Practical goals:** • How do community attitudes about ASL affect deaf children? • What are the similarities between bilingual childrens' "English only" movement and the signed English movement with deaf children?	Freeman, D. & Freeman, Y. (1994). Chapter: 9: How do community attitudes and politics of English only affect bilingual students? (pp. 201-217); Chapter 10: What influences students and teachers attitudes? (pp. 218-240). In Between worlds: Access to second language acquisition. Portsmouth, NH: Heinemann. Kannapell, B. (1989). An examination of deaf college students attitudes toward ASL and English. In C. Lucas (Ed.). Sociolinguistics of the deaf community (pp. 191-210). San Diego, CA: Academic Press. Keefe, J. (1982). Cultural Reproduction and the hidden curriculum: An investigation into preschool programs for the deaf. Unpublished doctoral dissertation, Boston University (pp. ii-iv, 12-16). Wink, J. (1997). Critical pedagogy: Notes from the real world (pp. 33-35). White Plain, NY: Longman.

Learning Log 18 **Theory goals:** • What influences teachers and students attitudes? • How can teachers recognize and resolve value conflicts? **Practical goals:** • What influences teachers and students' attitudes toward ASL and the learning of English? • How can teachers recognize and resolve value conflicts about learning ASL and English?	Freeman, D. & Freeman, Y. (1994). How can schools involve parents? (pp. 291-307). In Between worlds: Access to second language acquisition. Portsmouth, NH: Heinemann. Nover, S. (1993). Who will shape the future of deaf education? In M. Garretson (Ed.), Deafness 1993-2013: A deaf American Monograph, 43. Silver Spring, MD: NAD. Nover, S. (1995b). Politics and language: American Sign Language and English in deaf education (pp. 109-163). In C. Lucas (Ed.). Sociolinguistics in Deaf communities. Washington, DC: Gallaudet University Press.
Learning Log 19 **Theory goals:** • How can teachers develop an intercultural orientation? • How can schools involve parents? **Practical goals:** • How can teachers develop an intercultural orientation with multicultural deaf children? • How can teachers improve through classroom-based research?	Freeman, D. & Freeman, Y. (1994). Chapter 13: How can schools involve parents? (pp. 291-307). Between worlds: Access to second language acquisition. Portsmouth, NH: Heinemann.
Learning Log 20 Seminar evaluations	No new readings given.

APPENDIX D

A Conceptual Framework for Deaf Education: Bilingual/ESL Approaches to English Literacy

Syllabus
Year Two (Levels 1 & 2)
Fall 1998 (Level 1)

Kansas School for the Deaf

Purpose of the Star Schools Training Package:

The Star Schools two-year training package provides an opportunity for teachers to use critical pedagogy as defined by Wink (1997). Critical pedagogy is a process whereby teachers "name" their beliefs, "reflect" critically on them, and then take "action." Teachers in the Star Schools training will "name" traditional beliefs, critically and collaboratively "reflect" on them, and then "act" to implement effective practices of bilingual/ESL instruction that will enhance the achievement of deaf students in all academic classes. The overall focus will be on two components of bilingual instruction: (1) a bilingual approach that involves the use of ASL and English and (2) an ESL approach that involves the exclusive use of English as a second language.

Summary of Seminar Goals:

During the first year, teachers participate in 24 seminars (2 hours each) totaling 48 hours of training; the initial and final seminar of each semester is used for orientation/review and evaluation. The first year begins with a survey of current research on bilingual/ESL approaches, Whole Language approaches, first and second language acquisition and learning, and literacy development practices. Teachers reflect on these bilingual/ESL approaches/Whole Language/L1/L2 techniques, critically analyze them, and attempt to apply these approaches and techniques in their classrooms. This results in a collection of practical applications based on bilingual/ESL concepts designed specifically for deaf students.

Required Texts

1. Baker, C. (1995). A parents' and teachers' guide to bilingualism. Clevedon, England: Multilingual Matters (both semesters and second-year training).
2. Freeman, Y. S., & Freeman, D. E. (1992). Whole language for second language learners. Portsmouth, NH: Heinemann (first semester only).
3. Ovando, C. J., & Collier, V. P. (1998). Bilingual and ESL classrooms: Teaching in multicultural contexts. Boston: McGraw Hill (both semesters and second-year training).
4. Parasnis, I. (Ed.). (1996). Cultural and language diversity and the deaf experience. Cambridge: Cambridge University Press (both semesters).
5. A seminar packet of readings is provided (see a list of articles at the end of the syllabus).

Seminar Requirements

1. **Attendance**: Teachers attend 12 seminars (two hours each) per semester; the first is for orientation and the last for evaluation. Attendance is mandatory because participation in

and contributions to the seminars are essential; teachers who miss more than two seminars are subject to losing their stipend ($1,000 each semester).

2. **Communication**: Teachers are expected to use ASL during seminar meetings.

3. **Reflective Logs (RL):** Teachers are expected to complete the reading assignments and type reflective logs before weekly seminars, share individual responses, and participate in weekly reflective activities.

- Reflective log questions will be completed for 10 seminars each semester; these logs will be an individual's response to the readings, topics discussed in seminars, and/or experiences that teachers have had in their classrooms. Log entries will be used as a basis for group discussion, serve as a written record of individuals' thinking, and provide data for research purposes and dissemination of successful strategies of language teaching.
- Teachers are expected to keep all completed reflective logs in a binder throughout the year for documentation of professional development.
- It is critical that reflective logs be turned in on time for effective participation and for research purposes.

4. **Classroom Observation:** Teachers will observe one other teacher per semester for the purpose of describing language teaching, learning, use, and strategies (ASL and English) using an adaptation of the Whole Language checklist (Freeman & Freeman, 1992, p. 53).

5. **Videotaping:** Along with regular classroom observations, videotaping may be done at scheduled times. These videotapes will be utilized for a variety of functions in order to fulfill the requirements of the Star Schools project. The videotapes will identify appropriate approaches, strategies, and techniques for language teaching of ASL and English in the classroom.

6. **Research Participation**: Teachers must be willing to provide documents, photographs, and/or videotapes for the purpose of data collection and analysis, publication, and dissemination.

The First Year (Level One) of the Star Schools Training
First Semester, Fall 1998

Seminar No./Date	Topic Questions	Required Reading Assignments
S1 (Sept. 14)	Orientation and Introduction • **What are the expectations?** • **How are the seminars organized?** • **Self-Assessment**[18]	
S2 (Sept 28) **RL 1 Due**	**Why are deaf children considered bilingual?**	Chapter 1: Students (Ovando & Collier, 1998, pp. 1-26); Chapter 2: Living with two languages and two cultures (Grosjean, 1996, pp. 20-37, in Parasnis); Chapter 17: Living in a bilingual-bicultural family (Finton, 1996, pp. 258-271, in Parasnis).

[18] See Appendix I. for Self-Assessment Instrument for Teacher Standards.

Seminar No./Date	Topic Questions	Required Reading Assignments
S3 (Oct. 5) **RL 2 Due**	**What program model can best meet the needs of a deaf bilingual learner?**	Chapter 2: Policy and programs (Ovando & Collier, 1998, pp. 52-61); Chapter 4: Cognitive and language development of bilingual children (Hamers, 1996, pp. 51-75, in Parasnis).
S4 (Oct. 12) **RL3 Due**	**How does a Whole Language philosophy promote bilingualism?**	Introduction: Assumptions about Whole Language (Freeman & Freeman, 1992, pp. 1-9); Facts: On myths about whole language education (Weaver, 1995); Facts: On the nature of whole language education (Weaver, 1995); What about whole language (Weaver, 1996); Facts: On research on whole language education (Weaver, 1996); Language and literacy from a deaf perspective (Ewoldt, 1993-94, pp. 3-5).
S5 (Oct. 26) **RL4 Due**	**What does the research say about second language acquisition?** **Does this apply to deaf students?**	Perspectives on second language development: Implications for bilingual education (Snow, 1992, pp. 16-19); Myths and misconception about second language learning: What every teacher needs to unlearn (McLaughlin, 1992, pp. 1-11).
S6 (Nov. 2) **RL5 Due**	**How does whole-to-part learning apply to ASL and English?**	Chapter 1: Learning goes from whole to part (Freeman & Freeman, 1992, pp. 11-37); In support of bilingual/bicultural education for deaf children (Barnum, 1984, pp. 404-408).
S7 (Nov. 9) **RL 6 Due**	**How does being learner centered foster first and second language development?**	Chapter 2: Lessons should be learner centered (Freeman & Freeman, 1992, pp. 39-74); Fostering second language development in young children: Principles and practice (McLaughlin, 1995, pp. 1-11).
S8 (Nov. 16) **RL7 Due**	**Why is having meaning and purpose critical for deaf learners?**	Chapter 3: Lessons should have meaning and purpose for learners now (Freeman & Freeman, 1992, pp. 75-100); Cultural mediation of deaf cognition (Nover & Moll, 1997, pp. 39-50).
S9 (Nov. 23) **RL8 Due**	**Why is social interaction critical for teaching and learning?**	Chapter 4: Learning takes place in social interaction (Freeman & Freeman, 1992, pp. 101-130); Chapter 3: Teaching (Ovando & Collier, 1998, pp. 27-61).

Seminar No./Date	Topic Questions	Required Reading Assignments
S10 (Nov. 30) **RL9 Due**	**What are the modalities for deaf students?**	Chapter 5: Lesson should include all four modes (Freeman & Freeman, 1992, pp. 131-165); The view from the lab--Two ways to English competence for the deaf (Stokoe, 1974-1975, pp. 31-32); Development of ASL and English competence for learners who are deaf (Nover et al., 1998, pp. 65-75).
S11 (Dec. 7) **RL10 Due**	**Why is using the first language so critical?** **How can we effectively use the first language?**	Chapter 6: Learning should take place in the first language (Freeman & Freeman, 1992, pp. 167-204); Chapter 6: Early bilingual lives of deaf children (Padden, 1996, pp. 99-116, in Parasnis).
S12 (Dec. 14)	**How does teacher attitude affect deaf students?** Reflection and Evaluation	Chapter 7: Faith in the learner expands student potential (Freeman & Freeman, 1992, pp. 205-241); Review and evaluate the relevancy of the articles.

A Seminar Packet of Readings
A List of Articles

Seminar No.	SOURCE:
S2	Grosjean, F. (1996). Living with two languages and two cultures. In I. Parasnis (Ed.), Cultural and language diversity and the deaf experience (pp. 20-37). Cambridge, MA: Cambridge Unversity Press. Finton, L. (1996). Living in a bilingual-bicultural family. In I. Parasnis (Ed.), Cultural and language diversity and the deaf experience (pp. 258-271). Cambridge, MA: Cambridge Unversity Press.
S4	Weaver (1995). Facts: On myths about whole language education [On-line]. Available: The Heinemann Site. Weaver (1995). Facts: On the nature of whole language education. [On-line]. Available: The Heinemann Site. Weaver (1996). What about whole language. [On-line]. Available: The Heinemann Site. Weaver (1996). Facts: On research on whole language education. [On-line]. Available: The Heinemann Site. Ewoldt, C. (1993/1994). Language and literacy from a deaf perspective. Teachers Networking: The Whole Language Newsletter, 13(1), 3-5.
S5	Snow, C. (1992). Perspectives on second-language development: Implications for bilingual education. Educational Research, 21(2), 16-19. McLaughlin, B. (1992). Myths and misconceptions about second language learning: What every teacher needs to unlearn. (Educational Practice Report No. 5). Santa Cruz, CA: The National Center for Research on Cultural Diversity and Second Language Learning. (ERIC Document Reproduction Service No. ED 352806).
S6	Barnum, M. (1984). In support of bilingual/bicultural education for deaf children. American Annals of the Deaf, 129(5), 404-408.

S7	McLaughlin, B. (1992). Fostering second language development in young children: Principles and practices. (Educational Practice Report No. 14). Santa Cruz, CA: The National Center for Research on Cultural Diversity and Second Language Learning. (ERIC Document Reproduction Service No. ED 386932)
S8	Nover, S. & Moll, L. (1997). Cultural medication of deaf cognition. In Mary P. Moeller & Brenda Schick (Eds.), Deafness and diversity: sociolinguistic issues. Omaha, NE: Boys Town National Research Hospital.
S10	Stokoe, W. (1974-75). The view from the lab: Two ways to English competence for the deaf. Gallaudet Today, 5(2), 31-32. Nover, S., Christensen, K., & Cheng, L. (1998). Development of ASL and English competence for learners who are deaf. Topics in Language Disorders, 18(4), 65-76.
S11	Padden, C. (1996). Early bilingual lives of deaf children. In I. Parasnis (Ed.), Cultural and language diversity and the deaf experience (pp. 99-116). Cambridge: Cambridge University Press.

APPENDIX E

Star Schools Grant
A Conceptual Framework for Deaf Education
Bilingual/ESL Approaches to English Literacy
Year Two (Levels 1 & 2)
Level 1

Kansas School for the Deaf
Reflective Log 1

Sources:: Finton, L. (1996). Living in a bilingual-bicultural family. In I. Parasnis (Ed.), Cultural and language diversity and the deaf experience (pp. 20-37). Cambridge: Cambridge University Press.

Grosjean, F. (1996). Living with two languages and two cultures. In I. Parasnis (Ed.), Cultural and language diversity and the deaf experience (pp. 258-271). Cambridge: Cambridge University Press.

Ovando, C.J. & Collier, V. P. (1998). Bilingual and ESL classrooms: teaching in multicultural contexts. Boston: McGraw Hill.

Name: _____ Date: _____

Your responses should be at least one page (81/2" x 11") typed double spaced but no more that two pages. Attach this sheet to your work. Use size 12 font. Submit three copies of your responses.

1. Grosjean's (1996) personal belief is that Deaf children should be raised bilingually, that their first language should be sign language (if they are diagnosed as having a severe hearing loss), and that their second language should be the majority language (especially in the written form). Discuss your position on this belief.

2. Select a student in your classroom. Briefly describe his/her family background, home language use, previous schooling, present language use of ASL and English, finger-spelling skills, and whether or not he/she has a person-language bond. Do you consider this child bilingual? Why or why not?

APPENDIX F

Star Schools Project Grant
Ethnographic Observation of Classroom Communication
1997-1998

Name: _____ Date: _____

Location of Observation: TSD _____ NMSD _____

Attach your answers to the following questions to this form.

1. Based on your observations during the day, give examples of the two languages used by the teachers.
   - ASL (Signing/Watching or Attending)
   - English (reading, finger spelling, typing, etc.)

2. Based on your observations during the day, give examples of the two languages used by the students.
   - ASL (Signing/Watching/Attending)
   - English (reading, finger spelling, typing, etc.)

3. Based on your observations during the day, give examples of the two languages in the environment.
   - ASL (sign labels, sign books, etc.)
   - English (charts, written work, etc.)

4. Which language was used most often, ASL or English?

Comments:

APPENDIX G

FIVE YEAR PLAN

Year One - October 1997 - May 1998: Fact Finding Phase

1. Select staff (Project Director 100%).

2. Conduct an ethnographic observation of communication in classrooms.

3. Collect needs assessment data.

    a. Survey schools for the deaf nationally about current approaches for developing literacy through the world wide web and the Deaf Administrators list serve site.

    b. Analyze data regarding student literacy performance from existing assessment tools: Stanford Achievement Test, Woodcock Johnson Revised, Peabody Individual Achievement Test, Brigance.

    c. Collect and analyze data regarding factors that may impact students' literacy development (age at intervention, amount of hearing loss, home language, family demographics, etc.).

4. Develop an informal literacy assessment package for preschool through grade five.

5. Establish criteria for selection of staff.

6. Select and organize advisory group, including representation from New Mexico and Texas.

7. Contract with recognized national leaders in bilingual/ESL education for the deaf.

8. Begin staff training on general bilingual/ESL practices.

Year Two: Elaboration Phase

1. Continue conducting an ethnographic observation of communication in classrooms.

2. Develop bilingual/ESL program guidelines including a mission statement that explains the philosophical base of bilingual/ESL approaches.

3. Train staff in specific bilingual/ESL strategies and begin to implement them.

4. Develop evaluation requirements and data collection instruments for evaluation.

5. Develop instructional materials resources.

6. Describe bilingual/ESL strategies for parents to use in supporting literacy development.

7. Provide informational packets to parents including printed material, and videotapes.

8. Provide on-site training to parents for a computer-loan program which will provide a meaningful literacy opportunity between parent and child.

9. Consult and communicate with the advisory group twice a year.

10. Based on survey information and interest, establish additional pilot sites in other schools for the deaf following adapted Year-One activities.

Year Three: Implementation/Evaluation Phase

1. Continue ongoing training and assessment of bilingual/ESL strategies.

2. Identify the components of the on-site training package for use in other sites.

3. Develop and implement transportable training tools for teachers.

4. Establish a teleconference for parents to access information on bilingual/ESL approaches.

5. Compare and evaluate Year Two and Year Three English samples of students who are in the home computer-loan program.

6. Based on the data collection instruments identified in Year Two, evaluate the project.

7. Compare SAT scores of students in bilingual/ESL classrooms with the general deaf and hard-of-hearing population.

Year Four: Implementation/Evaluation Phase

1. Adjust training components based on feedback and results from Year Three data.

2. Develop Web sites in New Mexico and Texas Schools for the Deaf to disseminate information on bilingual/ESL approaches to English literacy.

3. Conduct SAT testing.

Year Five: Evaluation Phase

1. Adjust training components based on feedback and results from Year Four data.

2. Complete final evaluation and all other written reports.

3. Distribute training package including bilingual/ESL program guidelines for teachers and parents.

4. Press copies of the final product on CD ROM and distribute to other schools.
5. SAT testing/Informal Literacy assessment.

APPENDIX H

LANGUAGE LEARNING AND LANGUAGE TEACHING ISSUES

During Year One (1997-1998) (Levels 1 & 2) of the project, many complex issues related to language learning and language teaching emerged during seminar discussions. Further, in our collective work experiences, we have encountered university professors, administrators, teachers, and parents who have questioned the bilingual approach for deaf students. In the subsequent years of the Star Schools project, we will continue to address these complex questions and issues as outlined below.

Issue 1: Can we consider the deaf child bilingual?

Inherent in the bilingual approach is the belief that deaf students are indeed bilingual. Even though many deaf students do not achieve native fluency in English, most educators agree that deaf students grow up to be bilingual, using both ASL and English. Deaf adults use two languages in their everyday lives (Grosjean, 1998; Padden, 1996). For instance, they use ASL in face-to-face communication with each other and use English when reading a newspaper, communicating through the TTY or e-mail, writing notes or letters, buying a house, paying taxes, etc.

Issue 2: How are deaf bilinguals similar to hearing bilinguals? How are they different?

A substantial body of research on bilingual and second-language acquisition conducted in Canada may be found relevant by the Deaf community in studying the language learning of deaf children (Hamer, 1998; Hakuta & Mostafapour, 1998). However, two essential questions need to be examined: How are deaf-signing bilinguals similar to hearing-speaking bilingual? How are they different?

Similarities

Diverse background. Similar to hearing-speaking bilinguals, deaf-signing bilinguals are diverse (Kannapell, 1993; Grosjean, 1998). They represent different ethnic backgrounds. Further, deaf-signing bilinguals have other diverse features such as differences in amount of hearing level, age of onset, competency in ASL and English, and educational and family backgrounds.

Social Status. The Deaf community has been viewed as an ethnolinguistic minority similar to the Latino, African-American, Native American, Chinese, and Jewish communities (Vernon & Makowsky, 1969). Like the Latino, Native American, and African-American communities, the Deaf community's language (American Sign Language) has not been politically promoted in schools for the deaf. In fact, children have often been punished for using their minority language. In contrast, the Chinese and Jewish communities have established their own schools (Saturday schools) to teach Chinese and Hebrew to their children. Traditionally, ASL as the language of instruction has had lower status than English in schools for the deaf. Even today, most hearing teachers neither know nor use ASL fluently and university teacher-training institutions seldom require ASL fluency from their graduates. Texas is one of the few states in the nation that requires its teacher-education graduates to pass an ASL test to earn a state teacher's certificate.

Deficit Models. Deaf-signing bilinguals have often been placed in deficit types of language learning that submerge them in watered-down English language instruction and a "medical-audiological view" rather than in enrichment types of education where ASL is the language of instruction (Hoffmeister, 1996; Woodward, 1982), English is taught as a second language, and the culture of deaf people is celebrated. Similarly, hearing-speaking bilinguals are often put in English immersion classes where no support is given for their home language, or they are placed in poorly run, weak bilingual programs. Both groups have been traditionally forced into an English-based curriculum with little respect given to their native language and culture (Baker, 1996; Hakuta & Mostafapour, 1998).

Cognitive Disadvantages and Advantages. Early studies of hearing-speaking bilingual children reported academic retardation of children raised bilingually (Hamer, 1998). Similarly, traditionally, many oral supporters cautioned parents that the introduction of ASL would hurt deaf children's development of speech and language (e.g., Duffy, 1998; Ulrich, 1998). Later studies, however, showed that bilingual hearing-speaking children actually had a cognitive advantage over monolinguals such as a more abstract conception of language, divergent thinking, verbal creativity, attention to content rather than form and a greater symbolic capacity (see Hamer, 1998 for a review of these studies). In parallel, studies with deaf children of deaf parents by Vernon and Koh (1970), Cicourel and Boese (1972), and others have shown a cognitive and academic advantage for children who were raised with ASL in the home and who learned English later in school (see reviews in Vernon & Andrews, 1990).

Negative Effects of Bilingualism. Hamer (1998) pointed out that some studies show negative effects of bilingualism, especially among those students who never develop a strong foundation in their first language or mother tongue. These children may never

achieve full native competence in their first or second language, as shown by the achievement scores of many immigrant children from lower socioeconomic backgrounds. Similarly, many deaf children of hearing parents do not develop a strong first language in ASL until their later years. These deaf students may learn ASL from non-fluent models such as their hearing parents who learned ASL as a second language. Thus, these students often find themselves in an environment of language deprivation (Hamer, 1998). They often experience a life long frustration in learning English as a second language because of their weak background in ASL. Thus, some hearing-speaking bilinguals and deaf-signing bilinguals never achieve a strong foundation in their L1, which hampers the development of their L2 (Hamer, 1998).

Differences

Literacy/Family/Culture. Differences between hearing-speaking bilinguals and deaf-signing bilinguals also exist. One difference is that unlike most spoken languages, ASL does not have a written form (Padden & Ramsey, 1998). Thus, deaf-signing bilinguals never learn to write in their "first" language. Further, hearing-speaking bilinguals come from families who share a language and culture. In contrast, most parents of deaf-signing bilinguals are hearing and do not share their deaf children's language and culture. Deaf culture and ASL are largely passed down to deaf students not through their biological families but through other deaf adults and children in the community (Hakuta & Mostafapour, 1998; Hamer, 1998). As a result, ASL is often delayed until early childhood or early adolescence and in some cases even adulthood (e.g., Nover & Moll, 1997). What is commonly known in the Deaf community but infrequently written about in educational journals is that most deaf adults, even after years of English instruction, prefer to "think" and "communicate" in ASL.

Literacy Strategies. Hearing-speaking bilinguals often have access to more strategies in learning to read and write than deaf-signing bilinguals because of the similarities between some spoken and written languages. In contrast, ASL is very different in modality and form from spoken languages. For instance, hearing-speaking bilinguals can use a strategy termed "searching for cognates" when deciphering a second language. Cognates are words that are related across languages because of historical commonalties. For example, a Spanish bilingual may read the word carnivorous and then reflect back on the Spanish word carivora which has the same meaning (meat eating) (Jimenez, Garcia, & Pearson, 1996). (It is noted, though, that these cognate strategies are not available to other hearing bilinguals who read different orthographies such as Russian, Arabic, or Chinese scripts). Even though deaf-signing bilinguals do not have these advantages during literacy learning tasks, deaf-signing bilinguals who are fluent in ASL may have an advantage in

learning foreign signed languages using signed-language cognates. But this advantage does not necessarily transfer to the acquisition of a written language.

A Development Model. Nover et al. (1998) hypothesized a developmental picture for deaf-signing bilinguals. Traditionally, deaf students were expected to develop oracy skills first. When they failed at this, they were provided the opportunity to develop signacy skills. The model below proposes that deaf children should acquire ASL signacy skills first in order to build English literacy skills. In other words, deaf students need to have ample opportunity and complete language models to acquire ASL as a natural language. With this ASL foundation, deaf students can build and develop English literacy skills and possibly develop oracy skills (depending on aptitude and residual hearing). Because deaf students cannot acquire spoken English naturally (as hearing children do), much extensive and artificial language training is necessary. This oracy training may be feasible if it is introduced after the development of signacy and literacy skills (Nover et al., 1998). See Table 5 for a developmental model of this comparison.

Table 5: Bilingual Developmental Model

Deaf Language Acquisition and Learning	Hearing Language Acquisition and Learning
Signacy (e.g., ASL)	Oracy and Literacy (e.g., Spanish)
Literacy and Oracy (e.g., English)	Oracy and Literacy (e.g., English)

This model needs to be tested with longitudinal studies of deaf children learning language.

Many bilingual researchers today advocate an "additive bilingual" form of bilingual education. In this approach, the child learns a second language in an environment where both languages (L1 and L2) are equally valued and used (Coye, Humphries, & Martin, 1978; Hamer, 1998). A model to achieve "additive bilingualism" for deaf children has yet to be specified. This five-year Star Schools project will investigate this question.

Issue 3: If, indeed, deaf students are bilingual, what is their first language?

Many dispute the notion that American Sign Language is the first language of deaf students because 90% of their parents are hearing. They are, therefore, exposed to English since infancy. However, studies show that even though many deaf students have been

exposed to English (spoken or written) since infancy, they rarely, if ever achieve native fluency in English (National Center for Law and the Deaf, 1977). They do, however, acquire fluency in ASL because it is a natural visual language. ASL then becomes their "native" or "first fully acquired language," and English becomes their second language (Charrow, 1975; Meier, 1991; Mounty, 1986).

Issue 4: What empirical evidence supports the theory that learning ASL leads to increased English literacy?

This is perhaps the question most frequently asked by adminstrators and teachers. Many deaf professionals have "gut" feelings in favor of bilingualism because they have grown up struggling to learn English. Living as deaf persons often gives them insights into these complex language learning issues (e.g., Parasnis, 1996).

There is an emerging research base that shows the benefits of using ASL to teach English and academic subjects (see the monograph edited by Prinz, 1998 for a review of these studies). These studies have shown a correlation between ASL proficiency and English proficiency using measures of ASL and English such as the SAT-HI and written language samples. These studies report that students who have higher levels of ASL knowledge also have higher levels of English literacy skills.

Issue 5: Should ASL and English be mixed in the bilingual classroom?

Sociolinguists and educators argue that ASL and English should not be mixed in the classroom but that English and ASL should be presented separately (Woodward, 1990). How this is done is a source of great disagreement among educators (e.g., Bench, 1992; Bornstein, 1990; Charrow, 1975; Johnson, Liddell, & Erting, 1989; Reagan, 1995; Stedt & Moores, 1990). Some support the use of artificially constructed manual systems to make this bridge from ASL to English. Others support separating the languages by using only ASL or only English (speech or written English). This notion of language mixing needs further investigation and elaboration.

Admittedly, language mixing is a naturally occurring sociolinguistic phenomenon (McLaughlin, 1995). For instance, along the Texas-Mexico border, persons may speak Tex-Mex, a mixture of Spanish and English. Language mixing happens, too, when deaf people interact with hearing individuals. Deaf persons may use more English-like signing (called a pidgin or contact language) (Lucas & Valli, 1992). It is also natural for deaf students to mix languages, especially if they are not exposed to separate models in the

classroom. They will freely mix speech, ASL, manual systems, finger-spelling, writing, and drawing in their school communications (Maxwell & Doyle, 1996).

Educators have invented artificially constructed manual systems for the purpose of teaching English (see Bornstein, 1990 and Gustason & Zawolkow, 1993 for a description of these systems). These manual systems often include adding speech to signed utterances along with invented signs for morphemes and grammatical endings.

Although children naturally mix languages as part of their developmental process (McLaughlin, 1995), we do not recommend that teachers mix the language systems by using artificially constructed manual systems. Instead, we recommend that teachers provide accurate and separate language models of ASL and English (Woodward, 1990). Using ASL, the teacher can codeswitch from ASL to English using reading, writing, finger-spelling, finger-reading, typing, lip-reading, speaking, and listening (where appropriate).

We realize that it is difficult for teachers not to mix languages, especially teachers who have weak ASL skills, but these artificial manual codes of English are seldom used by the deaf community. In fact, for the most part, they are used by professionals because they are easier to learn given their native competence in English (Baker, 1978; Ramsey, 1989). For deaf children who are just developing their English competence, these manual systems do not give them a clear model of either language--ASL or English (Baker, 1978; Charrow, 1975; Hoffmeister, 1990; Nover & Ruiz, 1994; Reagan, 1995; Ramsey, 1989). Again, we do not recommend these manual codes for the classroom because deaf students need complete models of ASL and English (for a quick review, see Figure 1.)

To elaborate even further, inherent weaknesses in artificially constructed manual systems interfere with effective communication during instructional activities (Baker, 1978; Charrow, 1975; Hoffmeister, 1990; Nover & Ruiz, 1994; Nover, 1995; Ramsey, 1989; Reagan, 1995). For instance, when you mix ASL, a visual-spatial-gestural language, with English, an auditory-vocal-linear-sequential language, several events occur (e.g., Baker, 1978). First, speech is slurred and slowed; facial grammar features essential to ASL are omitted (Baker, 1978; Cokely, 1992). Similarly, morphemes and grammatical endings essential to English are often dropped (see Baker, 1978; Marmor & Petitto, 1979). These inappropriate invented signs do not follow linguistic principles of formation (Charrow, 1975). Some invented signs resemble sexual signs and present misinformation and confusion to students.

Language Distribution: How Much?

Related to the language separation and mixing issue is one of language distribution. Language distribution describes the allocation patterns of the language involved (Jacobson,

1990, 1995), i.e., how ASL and English should be distributed by the teacher and used in the classroom. In other words, what percentage of time should the teacher be using ASL and what percentage of the time should s/he be using English?

Again, the field of bilingual education can help us address this complex issue of language distribution. A range of language distribution options is available to bilingual teachers (e.g., Baker, 1996; Jacobson and Faltis, 1990). The two languages can be separated on the bases of four criteria: topic, person, time, and place. Topic refers to subject or content; one language can be used for math and the other language for social studies. A danger in this approach is that the minority language may be associated with history rather than technology or math (Baker, 1996). Person implies a team approach where different adults use one language--ASL or English. For example, the principal hired a deaf professional storyteller to use ASL with the students; a speech therapist would communicate in spoken English. The time dimension involves the use of one language (e.g., English) one day and the use of the other language (e.g., Spanish) another day, or the mornings may be in Spanish and the afternoons in English, or vice versa. The separation of two languages may also occur in terms of whole weeks or months or whole semesters. It may also be used across years. For instance, some schools may use the child's minority language 100% of the time from first grade through third, then switch to the second language in fourth grade (Baker, 1996). The fourth dimension is place. For instance, one language may be used on the playground or in the cafeteria, with the other language used in the classroom. Another separation dimension is medium of activity: For example, the teacher may use one language to have a discussion and then have the students write a summary using their second language. The danger in this language allocation is that one language may be used for "oracy" and the other for "literacy." This may give the children the impression that the second language has a higher status and more function than their home language. This dimension has important implications for deaf education too. Many teachers focus their instruction entirely on using ASL but give a test in English. When the children fail the test using English, the teacher is often puzzled about why they did not understand the concepts. Most probably, they understood the concepts in ASL but did not have enough exposure to the concepts in English to succeed on a written test.

Another language allocation is through curriculum materials (Baker, 1996). Some dual language programs utilize texts in both languages. In the case of deaf education, textbooks are in English, although the teacher may use some ASL videotapes. Another language separation dimension is through function and students. Often, classroom instruction is in the second language, but classroom discipline and private conversations with students are often conducted in the child's home language. Similarly, the teacher may

switch to the children's home language when she wants to give additional explanations on some topic to the class (Baker, 1996).

Language distribution is also related to the type of bilingual programming (see above under time allocation). Despite the media hype against bilingual methodology for hearing children, there is considerable evidence that supports certain types of bilingual programs as effective ways to develop English language skills (Baker, 1996; Crawford, 1989, 1997; DeFelix, 1990; Hakuta, 1986). In the beginning stages of a bilingual program, students may receive full instruction in their native language. Then, as they progress, they attend "sheltered" classes where instruction is increasingly given in English until a 50/50 percentage is reached in the upper grades. Some bilingual programs use a 90/10 model. Others use a 50/50 model for students who are just beginning a bilingual program (Faltis & Hudelson, 1998). The native language can be phased out as in "transitional"[19] programs, or it may be sustained as occurs in "maintenance"[20] programs.

In deaf education, a research priority is to experiment with these types of language distribution options and programs. At this time, we support the use of a maintenance bilingual model where the child continually grows, develops, and uses ASL and English concurrently. This would be most beneficial to deaf students. We do not recommend phasing ASL out of deaf students' lives at school as in a transitional bilingual model.

In our study, teachers in the Star Schools project began to reflect on how much time they spent in instruction using ASL and how much time they spent using English. Many teachers were surprised to learn that most of their instructional time was in ASL and that they were not providing enough direct English instruction (see Appendix I). During subsequent years of our five-year project, language distribution issues will be examined in greater detail.

Issue 6: Does knowledge of ASL directly transfer to knowledge of English?

The notion of knowledge and language transfer is often used to support bilingual education in general. However, few strategies that show teachers how to operationalize this concept in the classroom exist (Jimenez et al., 1996). It is often falsely assumed that

[19] The transitional bilingual model emphasizes the importance of students who are not yet proficient in English receiving instruction in their native language in all subject areas as well as instruction in English as a second language, but only for a limited number of years, with a gradual transition to all-English instruction (Ovando & Collier, 1998).

[20] The maintenance model emphasizes the importance of developmental bilingual education, placing less emphasis on exiting students from the bilingual program as soon as possible (Ovando & Collier, 1998).

the students' first language abilities will naturally and easily transfer to their learning of a second language. This false assumption has been applied to deaf students as well.

Using ASL for instructional purposes in the classroom does not necessarily guarantee that concepts understood in ASL will automatically transfer to comprehension in English. Certainly, many deaf students can make this transition on their own; however, many cannot. One of our deaf colleagues had the experience of teaching a history lesson. She was sure everyone understood the concepts she was teaching. After lively class discussions, she felt the students understood the history concepts because they could explain the concepts back to her using ASL. However, when the children were tested on the concepts in English, they all failed. Needless to say, the children did not have the appropriate exposure and explanations about the English equivalents to the ASL concepts. This example clearly demonstrates the breakdown of language transference. Students need exposure and instruction in both languages and opportunities to develop metalinguistic skills in both ASL and English.

In essence, deaf students need specific language teaching strategies to help them make the "language bridge" from ASL to English (e.g, Hoffmeister, in press; Padden & Ramsey, 1998; Prinz & Strong, 1998). Teachers must have specific language teaching strategies that explain the grammar of ASL and English in ways that deaf students can understand (Strong, 1988b). For example, English has grammatical forms such as articles, and the present progressive -ing is expressed differently in ASL than in English. Teachers would benefit from being skilled at codeswitching, that is, leading the child from one system to the other (ASL to English) and explaining how each system works, particularly in reading and writing activities. Just because a teacher is using ASL in the classroom does not necessarily mean he or she is following a "bilingual" approach. The teacher must have language teaching strategies to make this transition to bridge the two languages (Hoffmeister , in press; Padden & Ramsey, 1998; Prinz & Strong, 1998).

Some believe artificially constructed manual systems can make this bridge from ASL to English (Mayer & Wells, 1996). However, as mentioned above, these systems do not present clear models of either English or ASL (Charrow, 1975). Further, native users of English (hearing teachers) may find these systems easy to use, but deaf children who are still struggling with English find them difficult. Teachers in our project have commented that often deaf students can sign, word-for-word, a passage in a story, but they fail to comprehend the total meaning of the passage. For this reason and others, we discourage the use of these systems in the classroom.

We suggest that teachers use ASL and English as the languages of bilingual instruction. We also suggest they use bilingual/ESL strategies to explain how each language (ASL and English) works in communication, and reading and writing activities.

Issue 7: When should ASL be introduced?

We suggest that ASL be introduced as soon as the child is identified as deaf. ASL offers the best chance for cognitive and linguistic growth because it is visually accessible to all deaf children, and language is therefore naturally acquired. ASL storytelling[21] is also a powerful tool for developing a child's cognitive abilities. In addition to ASL, children will benefit from early exposure to finger-spelling, finger-reading, and print in their environment.

An ASL/English bilingual approach provides the foundation for emergent literacy. English, then, can be introduced through finger-spelling, finger-reading, storytelling,[22] and print awareness activities as soon as the child enters school. We suggest an "emergent literacy" perspective, which involves engaging children in reading and writing activities, and exposing them to a print-rich environment as opposed to direct instruction (Erting & Pfau, 1997). That is, children are exposed to environmental print such as how to write their name and family members' names; how to label drawings with letters and words; and how to identify print on street signs, clothes, food, and toys--all the functional uses of print. In a bilingual approach, story discussions can use ASL along with printed English books so the child is exposed to both (Andrews & Akamatsu, 1993; see Issue 10 for a discussion of ASL-English translation strategy). Follow-up activities involve finger-reading, finger-spelling, reading, writing, lip-reading, speaking, and listening (where appropriate). (refer to Table 1). This will lay the foundation for formal reading instruction in the first grade (sight word vocabulary, comprehension questions, story-retellings, recognizing the sign to print relationships etc.).

Issue 8: When should spoken English be introduced?

Spoken English or speech can be introduced when the child has already developed some English language concepts. Speech acquisition and development for deaf children differs from that of hearing children in fundamental ways. First, the deaf child does not

[21] Storytelling refers to the art of telling a story in an oral form or a signing form without a text as a reference.

[22] Deaf parents typically include finger-spelling as a natural part of language use with their deaf infants (Blumenthal-Kelly, 1995; Padden & LeMaster, 1985; Padden, 1991). This demonstrates the early use of codeswitching in a deaf bilingual environment.

have enough access to the auditory signal like hearing children do, even with amplification. Amplification may only serve to amplify the sound, and this signal may be distorted. Thus, the deaf child is not hearing the same sounds as the hearing child. Second, hearing children acquire speech effortlessly and unconsciously as they interact with caregivers. For deaf children, speech instruction is a long, tedious process of teacher-directed repetition, feedback, correction, explanation, and training (Graney, 1997; Mahshie, 1997). Deaf children do not go through the same "critical period" of speech acquisition as hearing children because deaf children do not have total access to the auditory signal. In fact, there are real biological limits for deaf children acquiring speech through the natural, interactive process hearing children use (Mahshie, 1997). We recognize that for the deaf student, sound is a weak point of access to spoken and written language when compared to the deaf student's access to the visual orientation of ASL.

Speech instruction, historically, has been harsh on deaf children. Many deaf adults harbor bitter and resentful feelings toward their parents and speech teachers who forced them to endure years of speech training (Nover & Moll, 1997). Traditionally, deaf children were taught speech from infancy. If they failed to learn language through speech, they were enrolled in a classroom that used sign language. There are inherent problems with this traditional approach. First, children were held back from learning concepts they could have quickly learned through ASL. Secondly, children were often made to feel like "failures" because they did not succeed with the oral approach. This damaged their self-esteem and hindered their language growth. As far back as 1910, in Why Not Reverse the Process?, George Veditz, a deaf teacher, leader and writer, suggested that deaf students be placed in manual classes when first entering school and transferred to oral schools afterwards instead of being transferred to manual classes only if they were unsuccessful in acquiring speech. Further, Gophert, in an 1899 article entitled The place of writing in the language instruction of true deaf-mutes, especially the less intelligent, argued that speech learning for deaf students was fundamentally different than speech acquisition for hearing children. For hearing children, learning to speak is effortless. In contrast, for children who do not hear, the learning of speech is arduous, and tedious and involves years of training.

Our point here is not to belabor the oral-manual controversy, but to move beyond it and provide fresh insight into the age-old challenge of language learning and language teaching by suggesting an alternative--the bilingual approach (Barnum, 1984; Kannapell, 1974; Livingston, 1997; Strong, 1988b). It is interesting to note that the number of years of speech training does not affect deaf children's speech intelligibility. In fact, it is the amount of residual hearing that is the greatest predictor of speech intelligibility (Jensema,

Karcher, & Trybus, 1978). Thus, even after years of speech training, it is not how many hours of speech training the student has had but the amount of residual hearing which determines progress with speech intelligibility. How children use their resiual hearing must be carefully observed. Some hard-of-hearing children, even with residual hearing and amplification, can only develop superficial communication strategies with speech and auditory training. An ASL/English bilingual approach may facilitate more effective communication by being more natural and comfortable for the child. In short, experts caution schools to avoid looking only at the audiogram to determine how much residual hearing the child has (Graney, 1997; Mahshie, 1997). The audiogram only shows amount of hearing in "pure tones." It does not tell the teacher how much functional use of that hearing the child has when communicating with family and friends or learning academic subjects.

Issue 9: Will the use of ASL hinder deaf students' English development?

Many professionals and parents believe that children will not learn or develop English (spoken and written) if they learn ASL. To use a sports analogy, if a person plays golf often, this does not mean her basketball skills necessarily will decline. The skills needed to hit a golf ball are fundamentally different than those required to handle a basketball. Similarly, ASL and English skills (speaking, reading, and writing skills) are fundamentally different. If the golfer wants to improve his basketball skills, he engages in more basketball practice. Similarly, if a deaf child wants to improve English skills (reading, writing, and possibly speaking), he must engage in more of these activities. In short, it is a gross oversimplification of psycholinguistic processes to blame the use of ASL for deaf students' low achievement in English skills, when in fact, ASL skills enhance English skills if the students are engaged in numerous English language learning activities. Further, development of English can enhance and expand the students' use of ASL. Both languages are mutually beneficial to the overall bilingual language development of deaf students.

In summary, there is no evidence to show that ASL hinders the development of English. In fact, there is evidence that English skills (spoken and written) are best developed after a language base in ASL has been established (for a review of studies of deaf children of deaf parents, see Vernon & Andrews, 1990). Clearly, more ethnographic studies are needed to investigate deaf children's bilingual development in ASL and English (finger-reading, finger-spelling, spoken, and written).

Issue 10: Will ASL "storysigning" facilitate deaf students' learning to read in English?

One reading instructional technique called "Read Aloud," has gained much popularity, and we discussed it at length in our seminars. For hearing children, teachers typically will take a written text (perhaps a storybook) and read it aloud to the students. Reading aloud to children is so important that it has received national attention by the National Commission on Reading which issued a report called Becoming a Nation of Readers (1985). The Commission stated, "The single most important activity for building the knowledge required for eventual success in reading is reading aloud to children" (Anderson, Hiebert, Scott, & Wilkinson, 1985, p. 23). Further, the Commission found conclusive evidence to support the use of reading aloud not only in the home but in the classroom as well. "It is a practice that should continue throughout the grades (Anderson et al., 1985, p. 51).

Read Alouds provide many benefits for hearing children (Fountas & Pinnell, 1996; Trelease, 1994). Specifically, Read Alouds can

- condition the child to associate reading with pleasure;
- create background knowledge;
- provide a reading role model for English;
- engage children in different aspects of sharing books;
- provide children with experiences;
- develop concepts about print, vocabulary, syntax, familiarity with styles of different authors, appreciation of different texts, and motivation to read by themselves;
- help children understand the purposes of reading;
- provide an adult model of phrased and fluent reading;
- develop a sense of story;
- develop knowledge of how texts are structured;
- expand the children's linguistic repertoire;
- make complex ideas available to students;
- promote oral language development;
- establish texts to serve as a basis for writing.

However, "Read Alouds" are not always easy for all hearing children. The pronunciation of a syllable structure in a particular dialect can be very different than its appearance in printed American English. This may confuse young children especially if they use the dialect themselves. The point is that many hearing children do not get standard spoken English models all the time in school. So when children try to read, they may not

always have one-to-one correspondence with their teacher's spoken English and the print they encounter in books.

Besides dialectical differences, spoken language, in general, does not always mirror the print. Children may be confused with the "silent e" form in written language. Words such as skated and walked produce the sound "ed" in different ways ("ed" sounds like "t" in walked). The point here is that spoken English has phonetic inconsistencies that are not accessible through written text. However, despite these sound versus spelling inconsistencies and dialectical differences, the hearing child benefits from exposure to frequent Read Alouds.

Read Alouds in ASL for deaf students differ significantly from Read Alouds with hearing children. Read Alouds are usually done in ASL, not English. However, we recognize their benefits for deaf children (e.g., Erting & Pfau, 1997; Hayes & Shaw, 1997; Livingston & Collins, 1994; Mather, 1989, 1996; Schleper, 1997). Specifically, Read Alouds

- condition the child to associate signing with pleasure, not reading;
- increase deaf students' background knowledge through ASL;
- provide a fluent ASL role model;
- engage children in different aspects of sharing stories through ASL;
- provide experiences to children who are not signed to at home;
- develop concepts about ASL signs, expand ASL vocabulary, syntax, familiarity with signing styles, appreciation of different types of ASL stories, and motivation to sign stories themselves;
- help children understand purpose for storysigning;
- develop a sense of story through ASL;
- develop a sense of how ASL stories are structured through ASL;
- expand the child's linguistic repertoire in ASL;
- make complex ideas in ASL available to the child;
- promote ASL development;
- establish a language bridge by providing ideas in ASL that children can link to another language like English.

However, "Read Alouds" do not provide deaf students with the English role model experienced by hearing children. We suggest that the term storysigning be used instead of Read Alouds for deaf children. The storysigning function presents concepts, plot, characters, setting etc. to deaf students in ASL (e.g., Bahan, 1992; Mather, 1989, 1996; Mather & Winston, 1998; Suppalla & Bahan, 1992; 1994; Wilson, 1996). Through storysigning, the signer can model the use of books, which will increase students' interest in them (see Andrews & Akamatsu, 1993; Schleper, 1997).

ASL-English Translation Strategy. For deaf students, we also suggest the term ASL-English translation strategy. Skilled teachers use both ASL and a variety of English texts in their classroom.[23] First, the teacher chooses an English text to be presented to the class. Next, the teacher provides an ASL translation of that text. We recommend that hearing teachers team with deaf teachers to provide a rich and meaningful translation. Finally, the teacher returns to the text by explaining vocabulary and grammar structures through finger-spelling and ASL.

Why Traditional Read-Alouds Don't Work for Deaf Students. Traditional kinds of Read Alouds or English-text-to-ASL-signing actions by teachers do not provide the forms of English (phonological, semantic, morphemic, syntactic, and pragmatic) that Read Alouds can provide to hearing children because the form of ASL is significantly different from the forms of English in terms of physical language features. For example, ASL is a visual and spatial language while spoken English is an auditory, oral, and sequential language. Further, the written forms of English are different from ASL. For instance, English semantics and syntax combine morphemes and sentences in a linear and sequential fashion while many grammatical features of ASL use movement embedded in the sign (while executed by the signer) as well as facial movements, raised eyebrowand, head tilts, and shoulder shifts to show grammatical meaning. Because of these differences, teachers cannot assume the "English-to-ASL signing strategy" will be sufficient to enable the student to build English skills unless the teacher makes the necessary language bridge between the two languages, ASL to English (e.g., Curry & Curry, 1978; Hoffmeister, in press; Padden & Ramsey, 1998; Prinz & Strong, 1998). In other words, teachers return to the English text, provide examples to the students, finger-spell the sentence so that students understand English syntactic forms, and point out specific vocabulary and grammar rules (depending on instructional goals). In this way, ASL functions as a bridge for deaf students to comprehend the English text. See Figure 4.

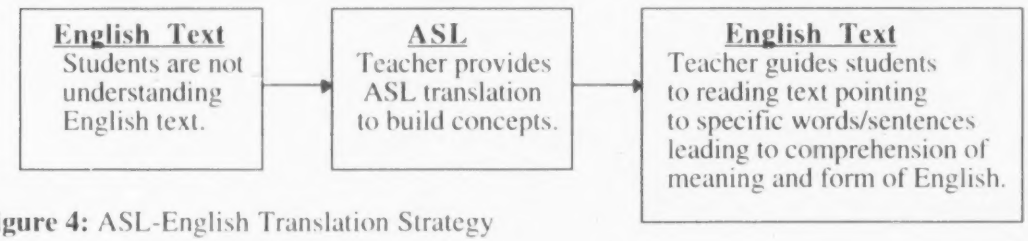
English Text
Students are not understanding English text.
ASL
Teacher provides ASL translation to build concepts.
English Text
Teacher guides students to reading text pointing to specific words/sentences leading to comprehension of meaning and form of English.

Figure 4: ASL-English Translation Strategy

[23] Examples of texts include the following. A teacher may read an article from a newspaper in a current events class, a recipe in home economics, a weather experiment from a science textbook, a battle scene from a history textbook, a play or a poem from a literature anthology, and so on. Texts have different structures which children need to experience in the reading classroom.

We illustrate here the ASL-English translation strategy with two English texts. The first is a narrative fictional text (a children's novel, Mr. Popper's Penguins [Atwater Atwater, 1938]), and the second is an example from an expository text about penguins on Philip's Island, Australia.

Ms. Jones, our fourth grade teacher, was teaching a thematic unit on penguins. In reading class, she had her students read Mr. Popper's Penguins (Atwater & Atwater, 1938). During the first day, she prepared the children for the novel by asking them what they knew about penguins. She summarized the novel in general terms, not giving away the plot. While preparing the week before, Ms. Jones (although competent in ASL) asked a deaf teacher to review the ASL translation of the first chapter of Mr. Popper's Penguins so she could provide the children with a rich and meaningful translation. She presented this ASL translation to her class (ASL-Whole) and then engaged the children in a discussion about the characters, plot, and setting in the first chapter, ensuring that all students understood her ASL translation. She also asked prediction questions to lead the class to the second chapter (ASL-Part). The next day, Ms. Jones used an overhead projector with a transparency of the first page of chapter one. Each student had his or her own copy of the novel, and they opened it to the first page (English-Whole). Ms. Jones' instructional objective that day was to go over vocabulary in Chapter 1 and make a list of new words for the students (English-Part). Ms. Jones read the first sentence while pointing to the words and finger-spelling them. She stopped at words she thought the children might not know and went into a deeper explanation giving examples.

Of course, there may not be time in class to go over every sentence in the novel, but such activities would ensure that deaf children were exposed to the English form of many varieties of English sentences. For homework, Ms. Jones assigned the students to read some parts of the novel on their own or within cooperative learning groups. Our point here is that deaf students may benefit from exposure to the *form* of English by finger-spelling the sentences and discussing vocabulary and English rules but only after the student understands the *meaning* of the sentence.

Ms. Jones used a follow-up writing activity in which the children used their new words and wrote a paragraph predicting what might happen in Chapter 2.

That afternoon in English class, Ms. Jones presented (using the same ASL-English translation strategy) an expository text, "A day in the life of the little penguin," a page from Penguins on Parade: Philip Island Nature Park (on-line). She presented the concepts from the text to the children in ASL (ASL-Whole) and engaged her students in a discussion about the ideas in the English text (ASL-Part). She then put the English print, which each student had, on the overhead (English-Whole). Mrs. Jones then pointed to the English text

to give an English lesson. She and her students went through the text sentence by sentence to give the children models of English syntax. During this English lesson, Ms. Jones frequently codeswitched, using ASL to explain a different English syntax pattern. Then she pointed to the English words and finger-spelled the sentence in English syntax. Students, thus, were exposured to the *form of English* using print and finger-spelling after having understood the *meaning* of the sentence in ASL.

Additional instructional objectives for future lessons may be to focus on the "to be" verb in English grammar. Ms. Jones could point to the use of the "to be" verb in several sentences from the text and provide the children with an explanation. Figure 5 shows the Whole-to-Part sequence of this lesson using the ASL-English translation strategy.

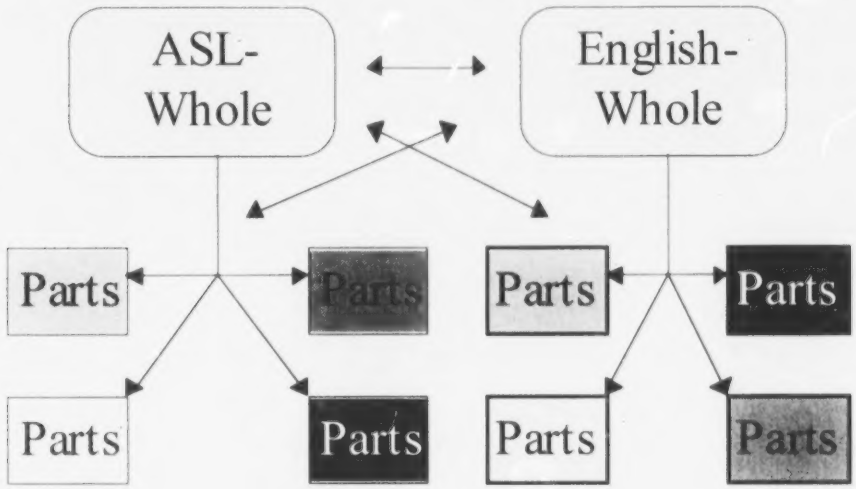

Figure 5: Complexity of Language Use: Whole-to Part Sequence

To conclude, this ASL-English translation strategy and whole to part sequence in both languages can be used throughout the day depending on the instructional activity. If the goal of a lesson is to teach English, signing stories/lessons in ASL must be followed up by direct English instruction for deaf students to get the benefits that hearing children do, that is, models of English words and sentence grammar (Padden & Ramsey, 1998). It is important to note that the use of translations between languages is a very sensitive and complicated issue. Traditionally, the primary goal of deaf education has been to teach English fluency in both spoken and written forms. We believe that the goal of education should be to provide content knowledge using ASL and English. We encourage the use of English texts in all classes (history, science, etc.); however, the subject content should be

emphasized as opposed to English grammar during these classes. In other words, English should be used in English classes, and subject matter should be emphasized in content classes.

Another critical issue that deserves attention is the inclusion of ASL as an academic subject for all deaf students (e.g., Coye, et al., 1978; Gallimore, 1992; Jacobowitz, 1994; Kelleher & Fernandes, 1992; Kuntze, 1994; Stewart, 1992b; Valli, 1994). This class should include the structure, pragmatics, and registers of ASL as well as fostering deaf students' metalinguistic skills in their first/dominant language.

APPENDIX I

LANGUAGE DISTRIBUTION

Data on Language Awareness of Teachers using ASL and English in the Classroom.

Language distribution describes the allocation patterns of the language used in the classroom. To identify this language distribution, teachers were asked to attach a day's routine/schedule to their learning log making an estimate of how much time they used ASL and how much time they used English in the classroom during a typical day. They were further instructed to make a column for the teacher's language use and one for the students' language use. Presented below is a sample of one teacher's language distribution study based on her analysis of activities during a typical school day.

Estimation of Language Distribution of ASL and English in the Classroom

Classroom Activity	Teacher use of ASL	Teacher use of English	Student use of ASL	Student use of English
Morning Meeting	95%	5%	95%	5%
Read Aloud	95%	5%	95%	5%
Favorite Word	5%	95%	50%	50%
Homework Conference	95%	5%	80%	20%
Language Experience	20%	80%	50%	50%
Illustrate Language Experience Story	20%	20%	20%	80%
Author's Chair	20%	20%	70%	30%
Various Reading	80%	20%	50%	50%
Quiet Reading (SSR)	100%	0%	95%	5%
Math	80%	20%	80%	20%
Conflict Mediation	90%	10%	90%	10%
Theme Activities	75%	25%	75%	25%
Journal	10%	90%	20%	80%
Average total	**60%**	**30%**	**67%**	**33%**

APPENDIX J

A Conceptual Framework for Deaf Education: Bilingual/ESL Approaches to English Literacy

Syllabus
Year Two (Levels 3 & 4)
Level Three, Fall 1998

Purpose of the Star Schools Training Package

The Star Schools two-year training package provides an opportunity for teachers to use critical pedagogy as defined by Wink (1997). Critical pedagogy is a process where teachers "name" their beliefs, "reflect" critically on them, and then take "action." In the Star Schools training, teachers will "name" traditional beliefs, critically and collaboratively "reflect" on them, and then "act" to implement effective practices of bilingual/ESL instruction that will enhance the achievement of deaf students in all academic classes. The overall focus will be on two components of bilingual instruction: (1) the bilingual approach which involves the use of ASL and English and (2) the ESL approach which involves the exclusive use of English as a second language.

Summary of Seminar Goals

In the second year, teachers will participate in 24 seminars (2 hours each) totaling 48 hours of training; the initial and final seminar of each semester will be used for orientation/review and evaluation of seminar content. The second year will begin with a survey of current research on bilingual methodology and classroom assessment. Teachers, using action research, will apply bilingual/ESL methods currently used with hearing children to identify those methods most effective with deaf learners. The teacher will then explore ways of measuring the effectiveness of these methods. These will result in a collection of effective bilingual/ESL methods with corresponding assessment tools to measure students' growth in language and literacy.

Required Texts

1. Baker, C. (1995). A parents' and teachers' guide to bilingualism. Clevedon, England: Multilingual Matters (both semesters and second-year training).
2. Faltis, C., & Hudelson, S. (1998). Bilingual education in elementary and secondary school communities: Toward understanding and caring. Boston: Allyn & Bacon.
3. Graney, S. (1997). Where does speech fit in? Spoken English in a bilingual context. Washington, DC: Pre-College National Mission Programs.
4. Prinz, P. (Ed.) (1998). ASL proficiency and English literacy acquisition: New perspectives. Topics in Language Disorders, 18(4).
5. A seminar packet of readings will be provided (see a list of articles at the end of the syllabus).

Seminar Requirements

1. **Attendance**: Teachers will attend 12 seminars (two hours each) per semester; the first will be for orientation and the last for evaluation. Attendance is mandatory because participation in and contributions to the seminars are essential; teachers who miss more than two seminars are subject to losing their stipend ($1,000 each semester).

2. **Communication**: Teachers are expected to use ASL during seminar meetings.

3. **Reading Assignments:** Teachers are expected to complete the readings before weekly seminars so that discussions of how to implement and assess method effectiveness can occur during the seminar.

4. **Reflective Logs (RL):** Teachers are expected to complete the reflective log assignments before weekly seminars, share individual responses, and participate in weekly reflective activities.

- Reflective log questions will be completed for 10 seminars each semester; these logs will be an individual's response to the readings, topics discussed in seminars, and/or experiences that teachers have had in their classrooms. Log entries will be used as a basis for group discussion, serve as a written record of individuals' thinking, and provide data for research purposes and dissemination of successful methods of language teaching.
- Teachers are expected to keep all completed reflective logs in a binder throughout the year for documentation of professional development.
- It is critical that reflective logs be turned in on time for effective participation and for research purposes.

5. **Classroom Observation:** Teachers will observe one other teacher per semester for the purpose of describing language teaching, learning, use, and strategies (ASL and English) using a newly developed checklist.

6. **Videotaping:** Along with regular classroom observations, videotaping will be done at scheduled times. These videotapes will be utilized for a variety of functions to fulfill the requirements of the Star Schools project. The videotapes will identify appropriate teaching approaches, strategies, and techniques for teaching ASL and English.

7. **Research Participation**: Teachers must be willing to provide documents, photographs, and/or videotapes for the purpose of data collection and analysis, publication, and dissemination.

The Second Year of the Star Schools Training
Level 3, Fall 1998

Seminar No./Date	Topic Questions	Required Reading Assignments
S1 (9/8/98)	• **Orientation and Introduction;** • **What are the expectations?** • **How are seminars organized?** • **Self Assessment**[24] • **What are the bilingual models?**	Chapter 2: What Does Bilingual Education Look Like? (Faltis & Hudelson, 1998, pp. 25-62);
S2 (9/14/98) **RL1 Due**	**What are the principles of language learning?**	Chapter 5: Bilingual Education in Elementary School Setting (Faltis & Hudelson, 1998, pp. 109-146).

[24] See Appendix 14 for Assessment Instrument for Teacher Standards

Seminar No./Date	Topic Questions	Required Reading Assignments
S3 (9/21/98)	**How are two languages allocated in a bilingual classroom?**	Allocating Two Languages as a Key Feature of a Bilingual Methodology (Jacobson, 1990, 3-17).
S4 (9/28/98) **RL2 Due**	**What three areas of language development need to be cultivated for the deaf bilingual learner?**	Development of ASL and English Competence for Learners Who Are Deaf (Nover et al., 1998, pp. 61-71).
S5 (10/5/98). **RL3 Due**	**What activities cultivate signacy, literacy, and oracy development in bilingual classrooms?**	Teacher presentations of language patterns.
S6 (10/19/98)	**What are the complexities of English literacy development for a deaf learner?**	Literacy and Deaf Children. The Language Question (Kuntze, 1998, pp. 1-15).
S7 (10/26/98) **RL4 Due**	• **What cultivates the relationship between ASL signacy and English literacy?** • **Does fingerspelling make English literacy possible?** • **Do English literacy make fingerspelling possible?** • **Is the relationship reciprocal?**	Reading Ability in Signing Deaf Children (Padden & Ramsey, 1998, pp. 30-46).
S8 (11/2/98) **RL4 Due**	**How do we cultivate ASL signacy and English literacy development in bilingual classroom?**	ASL to English Literacy (Andrews, 1997, p. 5); How Do You Do It? (Andrews, 1997, p. 276-277); Building Blocks for literacy: Getting the Signs Right (Andrews & Akamatsu (1993, pp. 5-9).
S9 (11/9/98)	**How do we effectively use the ASL summary technique to increase English comprehension?**	Using Sign Language Summaries: During Prereading Lessons (Andrews, 1996, pp. 30-34).
S10 (11/16/98) **RL5 Due**	**What are other visual and cognitive instructional techniques?**	Why Shouldn't Sam Read? Toward a New Paradigm for Literacy and the Deaf (Grushkin, 1998, pp. 179-204).
S11 (11/23/98)	**What are the complexities of oracy development for a deaf bilingual learner?**	Where Does Speech Fit In? Spoken English in a Bilingual Context (Graney, 1997, pp. 1-19).
S12 (11/30/98) **RL6**	**Reflection and Evaluation**	

A Seminar Packet of Readings
A List of Articles

Seminar No.	SOURCE:
S3 (9/21/98)	Jacobson, R. (1990). Allocating two languages as a key feature of a bilingual methodology. In R. Jacobson & C. Faltis (Eds.), Language distribution issues in bilingual schooling (pp. 3-17). Clevedon, England: Multilingual Matters.
S4 (9/28/98)	Nover, S., Christensen, C. & Cheng, L. (1998). Development of ASL and English competence for learners who are deaf. Topics in Language Disorders, 18(4), 61-71.
S6 (10/19/98)	Kuntze, M. (1998). Literacy and deaf children: The language question. Topics in Language Disorders, 18(4), 1-15.
S7 (10/26/98)	Padden, C. & Ramsey, C. (1998). Reading ability in signing deaf children? Topics in Language Disorders, 18(4), 30-46.
S8 (11/2/98)	Wilhite, M. (1997). Letter to the editor: ASL to English literacy. American Annals of the Deaf, 142(1), 5. Andrews, J. (1997). Letter to the editor: "How do you do it?" American Annals of the Deaf, 142(4), 276-277. Andrews, J. & Akamatsu, C. (1993). Building blocks for literacy: Getting the signs right. Perspectives in Education and Deafness, 11(3), 5-9.
S9 (11/9/98)	Andrews, J., Winograd, P. & DeVille, G. (1996). Using sign language summaries during prereading lessons. Teaching Exceptional Children; 28(3), 30-34.
S10 (11/16/98)	Grushkin, D. (1998). Why shouldn't Sam read? Toward a new paradigm for literacy and the deaf. Journal of Deaf Studies and Deaf Education, 3(3), 179-204.
S11 (11/23/98)	Graney, S. (1997). Where does speech fit in? Spoken English in a bilingual context. Washington, DC: Gallaudet University Pre-College National Mission Programs.

APPENDIX K

Star Schools Grant
A Conceptual Framework for Deaf Education
Bilingual/ESL Approaches to English Literacy
Year Two (Levels 3 & 4)
Level Three

New Mexico School for the Deaf
Texas School for the Deaf
Reflective Log 1

Sources:

Faltis, C., & Hudelson, S. (1998). Bilingual education in elementary and secondary school communities: Towards understanding and caring. Boston: Allyn & Bacon.

Jacobson, R. (1990). Allocating two languages as a key feature of a bilingual methodolgy. In R. Jacobson & C. Faltis (Eds.), Language Distribution Issues in Bilingual Schooling (pp.3-17). Clevedon, England: Multilingual Matters.

Name: _____ **Date:** _____

Your responses should be at least one page (81/2" x 11") typed double spaced but no more that two pages. Attach this sheet to your work. Use size 12 font. Submit two copies of your responses.

1. Using "Figure 2.4: U.S. Elementary Bilingual and ESL Programs" in Faltis and Hudelson (1998, p. 39), your experiences, and what you observe about your students during the first weeks of school, briefly describe which approach is the most appropriate for your present class. Include your educational goals related to L1 and L2. What are your reasons for selecting this approach?
2. Using "Figure 1: Subcategories of Language Distributional Patterns" in Jacobson (1990, p. 8), select one concurrent method to try in your classroom this week. Describe what you did, how the students responded, and why you selected this method.

APPENDIX L

STAR SCHOOLS PROJECT
ASSESSMENT INSTRUMENT FOR
TEACHER STANDARDS

Name_____ **School**_____

Fall _____ **Spring**_____

Directions: Please assess your present level of competency for each standard using the following criteria:

5 = *mastery* I understand the concept/theory/method. I can explain/teach it to others. I apply it in the classroom consistently.

4 = *maturing* I understand the concept/theory/method. I apply it in the classroom some of the time but am not sure how to apply it consistently throughout the day.

3 = *developing* I understand the concept/theory/ method, and I am beginning to apply it in the classroom one to five times a week.

2 = *emerging* I am familiar with the concept/theory/method but am not sure how to apply it to my classroom. I need more time to think of how to integrate this in my teaching.

1 = *beginning* I am not familiar with this. I need more information on this concept/theory/method.

I. Language/Literacy proficiency Self-Rating

1.1 I can comprehend and use ASL for a variety of authentic purposes, audiences, and contexts.
1__ 2__ 3__ 4__ 5__

1.2 I can comprehend and use English for a variety of authentic purposes, audiences, and contexts.
1__ 2__ 3__ 4__ 5__

1.3 I can codeswitch from ASL to English and English to ASL.
1__ 2__ 3__ 4__ 5__

1.4a I have linguistic knowledge in ASL.
1__ 2__ 3__ 4__ 5__

1.4b I have linguistic knowledge in English.
1__ 2__ 3__ 4__ 5__

1.5a I have a positive attitude toward language acquisition/learning of ASL.
1__ 2__ 3__ 4__ 5__

1.5b I have a positive attitude toward language acquisition/learning of English.
1__ 2__ 3__ 4__ 5__

1.5c I have a positive attitude toward American Deaf Culture and multiculturalism.
1__ 2__ 3__ 4__ 5__

1.6 I can integrate language/literacy skills with current technologies to access and use information.

1__ 2__ 3__ 4__ 5___

II. Bilingual/ESL Education and Deaf Education

2.1 I have an understanding of the fundamentals of and the similarities and differences between first and second language acquisition/learning processes.

1__ 2__ 3__ 4__ 5___

2.2 I have knowledge of bilingual/ESL instructional methods and resources.

1__ 2__ 3__ 4__ 5___

2.3 I can incorporate Nover's et al. (1998) "Bilingual Ability Framework" into teaching practices.

1__ 2__ 3__ 4__ 5___

2.4 I have knowledge of English literacy instruction.

1__ 2__ 3__ 4__ 5___

2.5a I have knowledge of ASL development.

1__ 2__ 3__ 4__ 5___

2.5b I have knowledge of English development.

1__ 2__ 3__ 4__ 5___

2.6 I can create bilingual and ESL learning environments within a multicultural setting that fosters positive social interaction, active engagement in learning, and self-motivation.

1__ 2__ 3__ 4__ 5___

III. Instructional Language Assessment and Research Self-Rating

3.1 I can develop and use formal and informal language/literacy assessment tools and strategies to guide instruction.

1__ 2__ 3__ 4__ 5___

3.2 I can interpret student performance data to adjust instruction.

1__ 2__ 3__ 4__ 5___

3.3 I can conduct action research to reflect and act on instructional strategies and analyze student learning.

1__ 2__ 3__ 4__ 5__

IV. Public Engagement

4.1 I can work with parents/residential staff and community to share accurate information about bilingual/ESL education and its impact on language/literacy development.

1__ 2__ 3__ 4__ 5___

4.2 I can train/mentor other teachers in bilingual/ESL approaches to improve language/literacy instruction.

1__ 2__ 3__ 4__ 5___

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Stephen M. Nover, Language Planner
and Star Schools Project Director
New Mexico School for the Deaf
1060 Cerrillos Road
Santa Fe, New Mexico 87503
V/TDD: (505) 827-6739
FAX: (505) 827-6684
E-Mail: snover@nmsd.k12.nm.us

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